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17 NOVEMBER 1989



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# ***JPRS Report***

# **Soviet Union**

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***Economic Affairs***

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# Soviet Union Economic Affairs

JPRS-UEA-89-037

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17 NOVEMBER 1989

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### Slyunkov Interviewed on Investment Policy, Technical Innovation

904A0036A Moscow PRAVITELSTVENNY VESTNIK  
in Russian No 21, Oct 89 pp 4-5

[Biography of and interview with Nikolay Nikitovich Slyunkov, member of the Politburo and secretary of the CPSU Central Committee, by V. Pokrovskiy, editor in chief of PRAVITELSTVENNY VESTNIK: "The Decisive Component"]

[Text]

#### Introducing the Subject of the Interview

Born 26 April 1929 in the little town of Gorodets, Rogachevskiy Rayon, Gomel Oblast. Belorussian. Graduated in 1950 from the Minsk Automotive Mechanics Tekhnikum and in 1962 from the Belorussian Institute for Mechanization of Agriculture. CPSU member since 1954.

Beginning in 1950, worked as assistant foreman, foreman, senior foreman, deputy shop chief, shop chief, deputy chairman, and chairman of the plant trade union committee at the Minsk Tractor Plant. Beginning in 1960, director of the Minsk Replacement Part Plant. Beginning in 1965, director of the Minsk Tractor Plant and then general director of the Minsk Tractor-Building Production Association.

Beginning in 1972, first secretary of the Minsk Party Gorkom. Deputy chairman of USSR Gosplan 1974-1983. Became first secretary of the Belorussian CP Central Committee in January 1983. In March 1986, elected candidate to membership in the Politburo of the CPSU Central Committee. Secretary of the CPSU Central Committee since January 1987. Promoted from candidate to full member of the Politburo of the CPSU Central Committee at the June (1987) Plenum of the CPSU Central Committee.

Hero of Socialist Labor, holder of the USSR State Prize.

[Pokrovskiy] Nikolay Nikitovich, you head the Commission of the CPSU Central Committee on Socioeconomic Policy. What are its basic tasks, and how is the effort organized?

[Slyunkov] First, I would note this: Creation of commissions of the CPSU Central Committee for the main issues in domestic and foreign policy was an important stage in the practical realization of the line adopted by the 19th All-Union CPSU Conference of discriminating the functions of party and government bodies, the Leninist principle of collective discussion and decision-making, and of democratization of the activity of the Central Committee.

Speaking in broad terms, the main lines of effort of the commissions, including the Commission on Socioeconomic Policy, are first of all to study and do the preliminary work on the most important issues in the life of the party and the country and preparation of alternative decisions for the Central Committee on the basis of analysis. The commissions are also preparing conclusions concerning fundamental problems which have been put up for partywide or nationwide discussion, and they analyze performance of party decisions and decrees of the Central Committee.

As for our commission specifically, it has every necessary capability for effective performance of its functions. Its members include important scientists, experienced organizers of production, outstanding workers and key officials of central ministries and departments, of local party and soviet bodies, and of the mass media. Our entire activity is structured on collective democratic principles.

The commission is not a policy-making body, but rather an analytical body. It has an extensive support group (aktiv) that possesses reliable information and has its own fundamental opinion on social issues, especially strategic, long-range issues. Which is understandable and natural. After all, we must advance new ideas, we must be able to foresee the possibility of negative things occurring, and we must seek out and find those turning points and decisions in socioeconomic policy which are not routine. We have been trying to make maximum use of the experience of staff members of the Socioeconomic Department of the Central Committee that play a direct part in preparing all issues submitted to the commission for consideration.

[Pokrovskiy] Scientific-technical progress and capital construction continue to be the key problems of our economy. In the social area, pension coverage has moved to the forefront. These issues are being actively discussed in the Supreme Soviet and the government. We know that they have been taken up in the sessions of your commission as well. We would like to go back to them once again in this connection. If you do not object, we might begin with the problem of pension coverage, which is disturbing so many people at the present time. After all, we are talking about the destiny of nearly 60 million of our citizens. So, what is the political platform of the pension reform, if we can refer to it in that way?

[Slyunkov] Our point of departure is that today the issue of pensions is probably one of the most acute ones. From both the social and the political standpoints. That is why we have attempted to examine the position of pensioners from every angle and to find fundamentally new approaches to this problem.

It needs to be noted that the commission did not analyze the draft of the Law on Pensions as such, but rather the conception and main directions of the pension reform. It

was important to define its ideology, its general principles, to conduct a thorough discussion of possible alternatives, opinions, and proposals of specialists and world experience.

Views and assessments in this area can, of course, differ widely. But one thing is clear—the pension system is in need of the kind of restructuring that will make it possible to organize it on the principles of the party's new social policy.

Now, to be more specific. It is beyond dispute that pensions must depend directly on the contribution of work, on what a person has done for society, the state, and the collective, and that they must give him social guarantees against all the misfortunes of life.

It is important to work out a mechanism for raising the levels of pensions and for linking them more closely to wages and length of service. It is also indispensable to devise uniform conditions and standards for pension coverage of workers, employees, kolkhoz members, and cooperative members. The closest attention needs to be paid to improvement of the position of those categories of our citizens who are least well-off and to the constant rise of the minimum pensions. At the same time, we cannot fail to take into account the principle of indexing pensions to the rise in the cost of living.

The cost of implementing the law is about 25-27 billion rubles. Never before have we had social projects of this magnitude. Judge for yourself, no more than 15-16 billion rubles have been spent for the social program in each of the recent FYP's.

Which accounts for the importance of the analysis and proposals concerning sources from which to finance pension coverage. What resources should come from the state budget? What can and should be the participation of enterprises, kolkhozes, cooperatives, and indeed individuals themselves on a voluntary basis?

These questions are being discussed from various angles. Ideas are being advanced on increasing the deductions of enterprises for social insurance, on creating pension funds, and on insuring pensions.

I think that we all share the same opinion: in spite of the financial difficulties, the law's implementation cannot be allowed to drag out. The time must be as short as possible.

Here is another point: How to take the worker's work contribution more fully into account in pensions? Obviously, the qualifying conditions for pensions and computation of the size of the pension must be based on a uniform principle reflecting length of service and the level of the wage. This approach will make it possible to stimulate labor effectively. Moreover, not just during the year before a man retires, but over a longer period of his most active working life. Perhaps the size of the pension should be computed for any continuous 5-year period

within the last 15 years or else 20 years of work. This is not simply arithmetic. This is policy.

[Pokrovskiy] In the opinion of many, the maximum size of the pension is one of the principal shortcomings of the present pension system. No matter how much you work, no matter how much you earn, there is one maximum that is the same for everyone. Is that correct?

[Slyunkov] You have touched upon one of the main issues in the pension reform. It is important to renounce leveling once and for all, but it is also important to fix a relative ceiling—for example, 75 percent of the wage at the maximum possible length of service. It is simple to arrive at that level: for every year of work beyond the years of service required for a pension at 55 percent of the average wage for the best period, you add 1 percent of its total amount. It is clearly advantageous to work longer and to earn more.

In order not to allow an excessive gap between the minimum and maximum pensions, we need a regressive scale for computing pensions against wages exceeding a certain level.

[Pokrovskiy] At this point, we would like to move on to the other topic indicated for our interview—the problems of capital construction. It is well-known that in 1986 structural perestroika was carried out here, and the new economic mechanism was introduced. How do you explain, then, that the issues of the efficiency of capital investments have remained among the most acute problems, just as they were before?

[Slyunkov] I must say for the sake of objectivity that certain improvements did occur in the structural perestroika as a result of measures taken in the investment sphere during the current FYP. But unfortunately they were not qualitative in nature.

We should frankly admit that the economic mechanism adopted in 1986 was unable to have a major impact on the problems of raising the efficiency of capital investments, since it was based mainly on intermediate and gross costs and could not be linked to the end product of construction—activation of projects and attainment of rated capacity.

That is the main thing that has preserved the defective practice of scattering resources, the disproportionately long length of the stages in the investment cycle, and the low return on capital investments. Average construction time of industrial projects exceeds the standard time by a factor of 2.7.

Every year, more than a third of the production projects in the state order are not activated. There is now a real threat of failure to fulfill the targets of the FYP for the growth of very important elements of the production potential.

The cost-plus mechanism that is now in effect is a particularly heavy burden on the economy because of the unrestrained growth of unfinished construction. During

the first 3 years of the FYP unfinished construction has grown by 38 billion rubles. Practically the entire growth of the national income is going to cover its growth. As a consequence, the rates and efficiency of economic development are dropping, and inflationary processes are becoming more acute.

The departmental and organizational disconnectedness of the investment process has the result that the economic interests of its participants are subordinated more to particular interests than those of the national economy. There is less mutual responsibility of clients, builders, designers, and suppliers of materials and equipment. In short, a real perestroika of investment policy as a whole has become urgent.

The commission has presented its conclusions and proposals on the main lines of perestroika of the economic mechanism in the investment sphere to the Politburo of the CPSU Central Committee, which has concurred in them and has sent them on to the USSR Council of Ministers for consideration.

[Pokrovskiy] What is the essence of those proposals?

[Slyunkov] We first of all have to reorient the economic mechanism in construction from gross indicators to the finished product and to make the prosperity of construction organizations dependent solely on activation of projects and capacities. We have had experience with this.

We have to renounce once and for all the budget financing of construction of production facilities with nonrepayable appropriations and make the transition to the system of credit financing. This will be a restraint against hasty and irresponsible decisions to build many expensive projects and will improve the efficiency of the resources used.

Further, we have to guarantee balance between plans for capital investments and construction and installation work and the financial and physical resources required. We need to undertake a temporary sharp reduction of capital investments for production capacities and construction and installation work. The draft plan for 1990 has taken a step in that direction, but in my opinion this is not sufficient. There needs to be a more sizable cut of 15-20 billion rubles from 1989. Moreover, this would not be reduction in the activation of fixed capital, but there would be an increase thanks to unfinished construction.

Of course, we have to take an inventory of construction projects of production facilities: We need to know which of them can be completed in a very short time and which can be reoriented, sold, or leased to enterprises, above all for them to organize the production of consumer goods.

The measures to increase the efficiency of capital construction require an improvement in project planning and estimation. An uncontrollable process of "hiking up" the volume of work, profit, and wages of project

planners is taking place today. In 1988, the value of project planning work increased by 1.7 billion rubles, the wages of project planners by 37 percent, and yet the quality of project plans did not improve. According to available estimates, only 1 out of every 10 project plans is up to the world standard.

It does not seem that we can get by with half-measures. A comprehensive program for the perestroika of project planning and estimation is needed. The main thing is to link remuneration of project planners with the quality of design features, the end result. There is an urgent need to create a system of extradepartmental expert evaluation of project plans and to adopt indicators for evaluating their effectiveness.

[Pokrovskiy] The solving of these and many other problems in our economy is directly bound up with acceleration of scientific-technical progress. How can the situation in that sphere be evaluated?

[Slyunkov] You are absolutely right. This is the key direction in solving the strategic problem of taking the economy to a qualitatively new level. But this first requires creating an economic mechanism which will make it possible to get away from the imperviousness to advances of scientific-technical progress. Otherwise, we will not only make no progress from where we are now, we will even be thrown backward.

In spite of the major steps that have been taken, the situation with accelerated use of the advances of science and technology is slow to change. The monopoly position of certain scientists, developers, and scientific-technical collectives is taking its toll. Competitiveness has begun to disappear. The loss of objective criteria has given rise to processes of mediocritization and leveling in creative work. The present economic mechanism cannot guarantee effective use of our scientific-technical potential. It does a poor job of stimulating its renewal and development. Our tax instruments and an effective depreciation policy and credit-money policy have hardly been activated at all. But the mandatory and administrative regulation which we took for granted for a long period of time cannot yield the desired results.

We need an integral cost-fighting economic mechanism for management of NTP [scientific-technical progress]. We should determinedly restructure the organization of science itself, change the forms and methods of operation of research collectives and administrative bodies, make them flexible and purposive, and give priority to competitive principles.

But I think that the main thing is to have fundamentally new methods of bringing the influence of the state to bear on the development of science and technology through a unified scientific-technical, investment, and structural policy and state scientific-technical programs. Scientific-technical and socioeconomic forecasts and expert evaluation must take on a real role in the planning

and management effort. At present, they often remain a scientific embellishment or an argument to support arbitrary decisions.

And finally, there needs to be a firm orientation toward discovery, development, and support of outstanding and talented individuals. On this, there cannot be two opinions, a system has to be set up that will provide the most favorable conditions for display of every distinct individuality.

[Pokrovskiy] As you noted earlier, one of the reasons for the stagnation in the field of NTP is the imperviousness of the economy to innovation. What effective measures can be proposed in this case?

[Slyunkov] I am profoundly convinced that the main role must go to economic methods of pressure. And it is not a question of knowing the various elements of the system of economic measures. How, when, and in what sequence they are applied is just as relevant. What are the socioeconomic consequences they will have? All of this still has to be worked on with great thoroughness.

For example, there have been interesting proposals on setting up an advanced system for taxing profit, for introducing tax deductions for enterprises and organizations which conduct R&D projects along priority lines, and so on.

The pricing system should also serve this purpose. I do not mean to say that the price has not been sufficiently activated in our country. But it does not reflect as much as it should the effectiveness of development projects nor the equivalence of the work invested. There should be a flexible system of prices for scientific-technical and science-intensive products.

Financial incentives of developers is equally important. And the main thing here is not to simply raise the level of remuneration. It is well-known that the raising of wages of personnel of scientific research institutes and design offices in recent years has not yielded an appreciable return from science to the economy. It evidently would be correct to form the wage fund of developers and scientists as a function of the economic benefit obtained by the consumer.

We can and must take the road of exploring new organizational forms in science, technology, and production. For example, small forms of scientific-technical activity, engineering centers, application centers, firms operating as middlemen, and so on. All world experience has vividly confirmed their extremely high effectiveness in the realization of new engineering and technology. They perform R&D projects twice or three times as fast with considerably fewer personnel and at between one-third and one-fourth the cost.

We are firmly convinced that a fundamentally new form of science needs to be created in the country and its new

place in society defined. This will in large part determine the technical, economic, and social level of our development.

Unless the plant and equipment of science is renewed, it is not possible to raise the quality of development projects nor the labor productivity of scientists and development personnel, nor to see that the work is done along the priority lines of research that have been chosen.

Significant steps are needed to democratize the management of science. Many scientists today rightly feel that we need a fundamentally new democratic structure for the organization of the scientific potential; otherwise, every effort toward reorganization on our part can result in nothing other than redistribution of resources.

And, of course, we need to get away from the consequences of autarky, which has all but isolated us from the world scientific community. Science is international, and we must draw the practical conclusions from that fact.

[Pokrovskiy] Nikolay Nikitovich, thank you for the interview.

#### Abalkin Evaluates Reform Process, Prospects for Success

904A0045A Moscow OGONEK in Russian  
No 41, 7-14 Oct 89 pp 1-2, 25-27

[Interview with Leonid Ivanovich Abalkin, member of the USSR Academy of Sciences, deputy chairman of the USSR Council of Ministers, and chairman of the State Commission of the USSR Council of Ministers for the Economic Reform, by OGONEK correspondent Leonid Pleshakov: "Not Sharing, But Earning"; date and place not given]

[Text]

[Pleshakov] I do not know if you agree with me or not, Leonid Ivanovich, but by all appearances creation of the State Commission for the Economic Reform has evoked a very mixed reaction. For 4.5 years, we have seen the country's economic situation get worse and worse and the standard of living of the population drop. Nearly every month new commodities are added to the list of those that are scarce. Meat is rationed, sugar is rationed, soap is rationed. First it is salt that disappears, then laundry detergent, now here in Moscow the lines have stretched out at tobacco kiosks: cigarettes have disappeared. An immense deficit in the state budget has been detected. Account balances in savings banks are growing, there is nothing on which to spend money. All of this is, of course, having an effect on the mood of the people. And the thought occurs surreptitiously: Will the most recent economic reform not end in failure like the others? And is creation of the commission for the reform not just a dodge, a desire to cover the latest failure with the names of the scientists?

I would like to begin our interview, Leonid Ivanovich, precisely with a conversation about our previous attempts at economic transformation, with an analysis of the reasons why they failed. It has now become fashionable to blame everything on the bureaucrats, the bureaucracy, which as it was in the reforms of Khrushchev and Kosygin, taking from them all their reasonable content, and then overturn them completely, since these reforms were depriving the bureaucracy of power. To be honest, this kind of explanation does not seem convincing enough for me. First, what kind of economic reform is it to be smothered so easily? Second, where did they find the 18 million blockheads—this mythical figure of the number of our bureaucrats has been wandering through the pages of the press constantly—who have so intrepidly cut off the branch they were sitting on. After all, together with their families and relatives they represent at least a third of our entire population, if not half. As they made the country's general situation worse, they were inevitably taking away from their own prosperity as well.

It all seems simpler to me: Economic reforms conceived out of the best motives encountered difficulties soon after their implementation began, and what happened is these difficulties forced a retreat to the initial positions. Accompanied, incidentally, by universal covert approval and a sigh of relief. It was a blessing that the possibility of that existed. Not that there were not also facts to compromise the reformism that had been undertaken. For example, the troubles with grain began under Khrushchev, state prices of meat and dairy products shot up. There were also strikes, and they were even suppressed, as in Novocherkassk.... Many people are disturbed by the question: Will that disastrous experience not occur again now? Will we not get tired of our present mess and turn back once again, giving up on the reform? What can be used to protect it from our past?

[Abalkin] What I intend to say will in some respects be close to your observations. If we look not at the details, but at the fundamental causes of our previous failures, then in my view they were quite logical.

The first of these causes is related to the fact that we were trying to radically alter the state of affairs in the economy and the population's living conditions by touching only the superficial elements of the economic mechanism. We replaced certain indicators with others: instead of gross output we began to keep count in terms of marketed output. Certain forms of economic incentives gave way to others. And that was all! The conclusion to be drawn from this lesson is quite clear: the economic system cannot be radically altered by touching its purely external and superficial layer. To achieve the result desired, one must go deeper to its underlying foundations and restructure property relations. The reform remains reversible until the foundations are affected. And only when it affects the deep roots will it become irreversible (and that not immediately, but as a final result).

All kinds of changes in production indicators, replacement of the ministries by sovnarkhozes and vice versa are by definition unable to improve anything essentially so long as the system of universal governmentalization of property is retained. So long as alienation of the worker from ownership and management of production is preserved, he will not acquire the right to be the full-fledged boss of the country and production. Without a change in property relations, all our efforts will amount to no more than brightening up the facade, giving the walls a new coat of paint, but not a perestroika of fundamental structures.

Which accounts for our logic that led to the present reform and determined the peculiar features of this stage in the country's life which we are now going through: the renewal must encompass the entire system of relations, including property relations.

This is the first thing that we understood when we analyzed the lessons of the past.

The second thing of which we finally became aware was that the economic reform cannot be regarded as an autonomous process; it cannot be carried out in isolation from the other spheres of society's life: political, social, and cultural (dukhovny). Earlier, we believed in the possibility of improving matters in the economy by changing only economic relations and without touching any of the rest: the renewal of political structures, democratization of social life, the shattering of ideological stereotypes. But now, on the basis of the experience of the last 2.5 decades, it can be stated that the reform of the sixties was condemned to defeat from the outset. It could not have been crowned with success, since it was conceived as an isolated, purely economic phenomenon: perestroika in the economy, but all the rest just as before.

This lesson led to the obvious conclusion which we are implementing today: the economic reform will yield a result only together with transformations in the political sphere of society's life. And the other way about.

Everything would, of course, be far simpler if perestroika could be carried out piecemeal. Come on, boys, say, first we will work with the economy. We will carry out the reform for 3 or 4 years, and then, when we have a solid basis, we will concern ourselves with the political system and ideology. But that is not allowed. History disallows the alternative of doing things in sequence. Perestroika can only go in parallel. Only in all directions at the same time. I once attempted to use the metaphor of light bulbs connected in parallel and in series. When they are connected in series, they burn dimly. And if the circuit has many loops, then they barely glow at all. When they are connected in parallel, they all burn brightly.

But...parallelism and simultaneity also create difficulties of their own....

[Pleshakov] Which in fact we are experiencing right now...?

[Abalkin] Yes, all of us, the entire country. But, unfortunately, we have no other alternative. Even our revolution was carried out differently: first we took power, and only then did we begin to concern ourselves with the economy. In the decades that followed. Whether we did a good or bad job of that is another question, but it is a fact that in the economic sphere we moved with great restraint at first. And only the Civil War and the intervention prompted speedier "governmentalization" of everything so as to make the transition to communism in one fell swoop. And that accounts for all those noncommodity (bestovarnyy) approaches, leveling distribution, and the ideology and illusions of war communism. Then there was the NEP and for the time being we did not force collectivization at all. Those were, of course, different times. That approach was probably possible then. It is difficult to replay history, but we can suppose that many processes would have gone differently under different conditions.

But the present situation—this is what makes it complicated and unique—demands that reforms be carried out at once in both the economic and political spheres. If we fail to see this and look for our difficulties solely in the intrigues and incompetence of the bureaucracy—though, of course, those things exist—we may again fall into a blind alley. And what distinguishes our present perestroika from the previous reform attempts is precisely that this time we are trying to do everything with an appreciation of the lessons of the past and by combining its various directions.

[Pleshakov] You said "we are trying."... Success is hard to come by at present?

[Abalkin] At present, it is turning out to be really bad....

[Pleshakov] But why? Or is it all just a question of our Russian impatience: faster, faster, faster? We rush everything, we are in a hurry. We want today what is possible only tomorrow? And the result...? Your speech at the 19th Party Conference was a cold shower for many people. Especially the passage in which you promised a deterioration of the economic situation. But reality has turned out far worse than you predicted....

[Abalkin] It is difficult for me to speak about this now, since there is a certain delicacy in the situation: I might be portrayed against my will as an oracle, the original discoverer of obvious truths and even made to say gloatingly: "If only they had listened to me back then...."

But I am still compelled to say that the attempt not to listen to the voice of alarm at the 19th Party Conference cost us almost a year in realizing where we were sliding. Almost a year before we finally began to take radical steps at economic recovery. If that voice of alarm and concern had been listened to and properly appreciated, then a year ago, even at the party conference and

immediately afterward, we would have begun to draft the necessary measures, and we might not have slipped into the present situation.

Here, I would like to emphasize—and this is very important—that that was not my personal opinion. I have already said, and I can repeat it, that the elections to the conference and the conference itself were an event without which there would have been none of what followed—neither the elections to the Congress of People's Deputies nor the congress itself. It all began with it. And I am a living witness to the way the elections to the conference took place and to how much each of us went through in becoming delegates to it.

I was elected to go to the 19th All-Union Party Conference from the city of Moscow. But first I went through the party assembly of my own institute, and later through the party aktiv of the Sevastopolskiy Rayon in the capital, in which the flower of Moscow's humanities institutes and almost the entire range of economics institutes of the Academy of Sciences are concentrated.

I had—I have them put away even yet—written instructions from scientists who are party members containing an evaluation of the situation in the country and proposals which might help in working out our difficulties. So that those assessments of the state of our economy which I offered were not mine alone. They coincided entirely with the assessments and recommendations which had been made by the scientists of our own institute and other economics institutes. And after the party conference when I delivered my report to the party members of the rayon, and later in the assembly of the economics department of the USSR Academy of Sciences, the scientists expressed solidarity with my speech and even remarked that their representative had given quite a good account of himself in the all-union party forum.

But since the situation in the country's economy was not so acute at that time as it is today, many delegates perceived my speech as excessive fault-finding. And we lost a year.

Yet still that is not the main reason for our difficulties today. Nor is it even that in the very process of perestroika the measures adopted were contradictory and inconsistent. The main trouble—it was also the cause of failure of the previous reforms—is that the understanding of the problems of the present stage has not become an element of social consciousness. It has not entered the pores, if it can be put that way, of the brain of every man, of every participant in the revolutionary process of perestroika. Social consciousness is rather conservative and quite often rejects all innovations, or, put more mildly, receives them without particular enthusiasm. I am convinced that even today the underlying conceptions of perestroika which the party and the Central Committee have begun are not meeting with full comprehension.

[Pleshakov] Is this confirmed, in your view, by the proceedings of the Congress of People's Deputies and by the first session of the USSR Supreme Soviet?

[Abalkin] Yes it is, unfortunately....

[Pleshakov] I have watched closely the television broadcasts both from the congress and also from the session of the USSR Supreme Soviet; to be honest, I was surprised by many things. The deputies demanded in a body that the supply of energy be increased to industrial workers and peasants, that conditions be improved for the population, and at the same time they all objected to construction of power stations: nuclear, thermal, hydro, in the lowlands, in the uplands. They would all like to receive power in finished form from neighboring regions and republics, but in no case by building new power plants on their own territory. They all supported reduction of the planting of cotton and its replacement by synthetic fiber. But no one wanted the chemical industry developing on "his" territory.... This is a kind of tunnel vision: I understand only a fragment, but not the whole picture.

[Abalkin] I personally was not even so amazed by that....

I sat through the entire congress and then also the session of the Supreme Soviet first as a deputy and then as a member of the government, so that I was able to observe, as they say, firsthand all the nuances of what took place and, I confess, I was astounded by a great number of things (in this case, I limit myself only to the economic aspects). On the one hand, all the speakers were demanding independence, abolition of the dictate of ministries and departments, reduction of the share of the state order. And at the same time, they unanimously insisted on guaranteed material supply. After I was elected deputy chairman of the Council of Ministers, I often sat alongside Nikolay Ivanovich Ryzhkov and saw the position in which he found himself. Dozens of deputies would come up to him with written and oral requests to guarantee deliveries, to guarantee material and technical supply, and so on, and so forth. Although they all should have understood clearly that as soon as you have been victorious in taking from the government the state order it uses to assemble resources, then you have no right to demand that it supply you. After all, this is directly connected.

And more. They were all demanding that the incredible deficit in the state budget be kept down. And at the same time, every one was asking for larger appropriations for his respective sector or the region which he represents. This was quite evident in connection with reduction of the military budget. They all rejoiced that it was reduced, but they immediately set about sharing it, forgetting about the deficit. Debts have to be paid to the agricultural sector, money is needed to finance health care and education, pensions have to be raised, supplemental coefficients have to be adopted for those working in difficult regions. But they do not understand that all of this represents an additional load on the budget. And

they do not want to understand it. No one wants to notice the contradictions. We have shaped an amazing variety of a kind of socialist dependence: exert pressure on the government to extort from its supply, benefits, and resources. As though the government were the head of a patriarchal commune—a strong, good, and wise father: just ask and he will make a present to you from his bounty....

[Pleshakov] You did not expect that?

[Abalkin] To be honest, I did expect something like it.... But not that this phenomenon would take on the form and proportions it did....

At the very beginning of perestroika, when many people's heads were turned by the enchantment of rosy prospects, I warned against euphoria. My favorite expression at that time was: Do not harbor illusions, and you will not be disappointed. When a man gives himself over to illusions, disappointments are inevitable. The difference is only in their degree and depth. This is easy to explain even in purely psychological terms. All the more reason why it should be clear to economists and politicians. Not always, it has turned out. Which accounts for why some measures were not comprehensive and some decisions were not consistent.

Many things were involved here. Not least among them was the absence of a unified conception, the lack of a cohort of like-minded people thinking and acting in synch, not at cross purposes. Understand me, I am in favor of a diversity of opinions, different shades, and so on, but in some things the team has to be unanimous and has to have the same understanding of the principal mission. Otherwise, I think, it will be very difficult for us to make progress....

[Pleshakov] But in your view have there been any favorable shifts, at least in this regard?

[Abalkin] Yes, probably.

When I was confirmed in the Supreme Soviet, much of what was said by me and the others who spoke in the sessions of the respective commissions discussing my nomination retreated into the shadows. The conversation in the commissions was more detailed and professional, and, it seemed to me, more interesting.

[Pleshakov] Why exactly?

[Abalkin] Because of its high level, the depth of understanding of economic problems. One of the fundamental approaches which I proposed for solving the upcoming economic problems I put this way: We have to make the transition from the principle of sharing to the principle of earning. Up to now, we have lived in a psychology of sharing, and we rack our brains not over how to make more, earn more, link the measure of what we want to get to the measure of our contribution to augmenting the wealth of society, but over how to divide up even what we have not created.

Someone once said: We behave like a couple getting divorced when the question is being decided not how to live together and increase what they have, to leave something to the children, but how to divide up the common property.

So that in the commissions there was no discrepancy between the state of affairs in the economy and the assessment of them. But beyond that, alas, it is not always possible to find mutual understanding. At this point, some of the republics and the city of Moscow are making the transition to cost accounting (khozyaystvennyy raschet). And again we observe unrestrained enthusiasm and an incomprehensible euphoria. In principle, the measures that have been adopted are, of course, a blessing. They unfetter the hands of initiative, they give the republics an opportunity to run their economy more efficiently than before. But also they will have to work far more than previously.

I have been trying to cool off some of the comrades who have a particularly optimistic outlook: First, please do not suppose that from the moment of the transition to cost accounting you will have any growth of resources at all. If your resources are to be augmented, they have to be taken away from someone. The transition to cost accounting only gives you the right to earn, that is why you must tell your citizens: We will keep everything we earn after we pay taxes to the state. And we ourselves will decide for what those resources are to be spent: to build hospitals and schools, to landscape the grounds, to carry out environmental measures. And the second thing you must unfailingly understand is that with the transition to cost accounting you are taking upon yourselves the full breadth of responsibility for solving the entire range of your region's economic, social, and environmental problems. There will no longer be anyone to refer to. That time is coming to an end when the whole mess could be blamed on the Council of Ministers, Gosplan, and so on. When people said they did not give, they did not plan, they did not allocate the resources. Taxes are being introduced which you must pay, the size of the state order is determined, and beyond that you do as you please. And you will be accountable to your constituents for your ability to manage things....

[Pleshakov] And what do they reply to you?

[Abalkin] Silence.... As though they encountered something utterly unexpected. Yet real cost accounting—whether it applies to the enterprise, the region, or the subdivision of some other economic complex—is in fact the transition from sharing to earning. We are in general making the transition now to a new way of life, a new pattern of relations within collectives and between individual collectives. It is breaking down structures, psychology, and thinking that have taken shape over decades. This applies to everything: wages, apartments, and the consumer market. We have to rethink many things, since our previous concepts were shaped in the context of poverty and a low standard of living. When income was sufficient only to barely make ends meet

when you lived in a communal apartment. And now that old thinking is growing to become a great social issue which we are not ready to resolve.

For example, in our commission we prepared the draft of a law on the unified tax system for presentation to the USSR Supreme Soviet: taxes on profit, on cooperatives, taxes on personal income, and so on, but there is no tax on inheritance in that system. Since we do not know from what side to approach this question....

[Pleshakov] There is no conception?

[Abalkin] There is no conception, and no scientific development work has been done....

[Pleshakov] But in the West the law on the inheritance tax is one of the main ones....

[Abalkin] But the law of inheritance over there is bound up with a different social structure and a different standard of living. And also they approached this problem far earlier than we did, so that they have gained a great deal of experience. We have come up against it only now. And it has turned out that we do not know much. We have begun to reflect at a purely intuitive level. On the one hand, there would seem to be an element of social injustice when two young people start their lives from different initial positions: one begins with nothing, and the other already has a good apartment and a weekend cottage and a car and money which have been inherited. But on the other hand, to take these benefits away from the latter would mean taking away the incentives, the initiative, the desire of the most active strata of the population to do good work and work at a high level of productivity. In the final analysis, when we speak about earnings, few people in practice are thinking about themselves personally, about buying themselves an extra suit. They think more about their family, about the upcoming generation, about their children. Perhaps they think too much about them, but we would not be Russian if we did not go to extremes in everything. In short, to leave behind a memory of ourselves, to guarantee our children good living conditions—that is an extremely powerful driving force. So, you cannot just pick it up in passing and cut it off....

But, as you see, these are all arguments at the level of intuition. There is one extreme, there is the other extreme, and you cannot make either one the basis of the tax system....

[Pleshakov] So what then?

[Abalkin] And we...have shyly skirted this question. We were not ready to propose any sort of systematic conception. And, unfortunately, we did not have a single specialist among us who would have been able to put his proposals forth clearly.

[Pleshakov] But you could have invited in people who are close to this problem, so that they could discuss everything and search out the lines of a solution....

[Abalkin] I am convinced in advance that there would have been a dispute, an outcry, an absence of mutual understanding and nothing constructive....

[Pleshakov] As I listen to you, Leonid Ivanovich, I keep turning this question over and over in my mind: Why, after all, did you agree to take this position? My last interview with you was on the last working day of the past year: on the evening of 30 December. Even then you were already saying that the country's economy was in a state of emergency. That emergency measures were required to get it out of that situation. Since that time our affairs have only gotten worse. And suddenly you agree to leave pure science for practice and, what is more, to go to one of the "hottest" places. I do not understand.

[Abalkin] I confess that the offer to take this high position in the government structure was rather unexpected for me, and, of course, it meant an important change in my way of life and many other things. But I must honestly say—I do not know if this will be interpreted to my credit or not—I did not hesitate very long....

[Pleshakov] Why?

[Abalkin] Although I have been engaged, as you put it, in "pure" science, nevertheless very frequently—and this is also the case of other economic scientists—I have been engaged to draft government documents of an economic nature. Since back in Kosygin's time as a matter of fact. So that the job offered me was not in general something completely new to me.

And beyond that. My understanding of what is happening in the country's economy simply did not allow me to stand off to the side. This did not square with my ideas about civic duty. (I will perhaps appear somewhat old-fashioned, but the terms Citizenship, Citizen, and Duty are not empty words for me.) After all, the fatherland was in danger! I am firmly convinced that no one who cares about its destiny can stand to one side in such a time and think about his personal tranquillity....

You have surely noticed that Ryzhkov's deputies are mainly people around 60. And there are many such people in the highest party leadership as well. That is my generation, a generation with a difficult childhood and a tough adolescence. A generation which did not take part in the war, but still had plenty of trouble in those harsh years. And so now it has inherited from its predecessors the country's collapsing economy, which has to be set to rights. So, what is one to do when your contemporaries have tackled this intractable job and proposed to you that you work with them? I think you have to agree.

[Pleshakov] That is clear. And so how did it happen? In what sequence? After all, it was not so simple as your being offered the post, and you answered: Yes, I will....

[Abalkin] It seems to me personally that it all began back at the 19th Party Conference. After my speech, I felt a

kind of zone of alienation around me. As I have said, my speech was not appreciated by everyone, not by any means. People who had become accustomed to sensitively pick up the mood of the "elites" somehow indicated their line of behavior clearly and even managed to criticize me from the speaker's rostrum of that high-level party meeting. So this is how it was.... Sometime after the lunch break, I was standing alone near the entry to the Kremlin Hall of Congresses. There was still a little while before the next session would begin, I wanted to get some fresh air and have a smoke. I saw Ryzhkov walking from the building of the Council of Ministers. He came up to me, put out his hand. He looked in my eyes for a long time: "We have to have a talk."

We met and we talked. Soon, I was invited to take part in a session of the government in which the draft of one of the laws was being discussed. And just a bit later our institute was commissioned to present a report on the economic reform and on its further improvement. To be sure, not all the members of the Presidium of the USSR Council of Ministers concurred in our viewpoint at that time, but nevertheless we were commissioned to prepare another series of reports. Thus, Nikolay Ivanovich had excellent knowledge of my positions on the issues of economics in general and concerning the reform in particular. And, of course, I also had a good idea of the level of his requirements. So that when they proposed that I head the state commission for the reform and take the position of deputy chairman of the Council of Ministers, I asked for time to think it over. They gave me a day.

[Pleshakov] What did you think about during those hours, who did you consult with, who did you tell first about the offer made to you?

[Abalkin] My wife, of course. We were students together, so that she could understand and appreciate better than others what I was undertaking....

Well, and what did I think about...? For some reason, in those 24 hours I was given to think it over I constantly had before my eyes the image of Repin's barges. Believe me, I am not a painter. But they are what stuck in my mind. By the next morning, I had made my decision: I had to say yes.

[Pleshakov] Who else did you consult with?

[Abalkin] After I made my decision—no one. I simply told my children (I have a son and daughter), the colleagues I worked with in the institute, my fellow scientists. There was rather a long gap between Ryzhkov's offer and confirmation of my nomination in the session, so that in those several days I managed to speak with everyone whose opinion was important to me and whom I felt it my duty to tell about this personally, before the official announcements were made.

My comrades in the institute were, of course, first. In the 3 years I have worked there, we have shaped a close and strong command of like-minded people. I asked to be

allowed to continue as director of the Economics Institute if I became deputy prime minister. And I obtained consent. Of course, I would not be able to give it the same time as previously, so that a large part of my burden must fall on the shoulders of my deputies. At the same time—and we all also understood this—I would be able to cover for them and help them in some ways. With this kind of institute under my direction, it would be easier for me to work out the scientific aspect of proposals which would be passing through the commission. So that everything worked out rather fortunately for all sides, although everyone had a heavier load.

[Pleshakov] And how did your fellow scientists take it?

[Abalkin] With understanding. The main thing is that they all agreed to help in the effort. Aganbegyan and Petrakov, Bunich and Popov, Zaslavskaya and Shatalin—all of them. Tatyana Ivanovna Zaslavskaya, who is an emotional person, exclaimed: "You believe that there is still something that can be done? No one wants to work, everything is collapsing, we are slipping downward!"

[Pleshakov] And what did you say?

[Abalkin] And I...what could I say to her? She herself understood that someone had to tackle the job. It made no difference whether it was I, or she, or someone else—we all would have to work. There simply is no other way out....

But still I got my come-uppance. Even during my first talk with Ryzhkov, I said that some people would see my consent as a desire to sell myself at a good price and gain certain benefits in keeping with that high position. He was surprised: "Is it really going to be like that?"

So that when I set forth my program and understanding of the problems in the Supreme Soviet, answered the questions, and the deputies began to discuss my nomination, Prunskene, a doctor of economic sciences who was the representative of Lithuania, recalled the man who sold himself for a mess of pottage....

[Pleshakov] Did you say anything back to her?

[Abalkin] No. They did not give me the floor again. It would not have been worth mentioning, but the irony of fate is that in exactly 2 weeks Prunskene herself was appointed deputy chairman of the Lithuanian Government and chairperson of the commission for the economic reform....

[Pleshakov] Interesting, and is she now applying to herself those scruples about a mess of pottage? If she is an honest person, she would have to....

[Abalkin] Let that remain on her conscience. But I also had to go through that. Still, the main thing is something else; all of my colleagues, all of my comrades, expressed a readiness to put on the harness and begin to pull, to pull our barge in concert. Out ahead, behind, standing apart, perhaps even as a consultant that walks alongside

and suggests how to change the position of the harness so as to get a better result, helping "in that way" to improve the organization of work. The main thing is that all our separate harnesses and efforts go toward a single common tow rope, which is attached to the bow of the barge....

[Pleshakov] In that sense, I think you have simply been lucky. Or, Leonid Ivanovich, do you still not feel yourself a part of the machinery of government? Time will pass and.... I remember your director's office in the Economics Institute. A lot of greenery, flowers, some pictures. And a great many flowers in the reception room. Everything disposed toward calm work, toward confidential communication. And now.... These oak panels on the walls. These massive armchairs, the bookcase, rows of chairs around the table for meetings—it all smells somehow prewar. In such an office, it is suitable to issue instructions, to pound your fist on the table, to "convince" those who are obstinate. From the Kremlin offices I have seen—both with my own eyes and in the movies and in photographs—they have all somehow managed to look the same. A single social order?

[Abalkin] I have been working here quite little as yet, and still I have already managed to change some things. If we meet again a bit later, you will see whether everything here is the same as it was or not. But, seriously, I am against oversimplified approaches. I would not be so offhand as to set the machinery of government in opposition to science, I would not want to deny the great influence which personal relations sometimes have on social processes. I have to remain myself even in my new position. You know, there is a silly song.... I remember just one verse of it:

"We have already played the first period. "And we have come to understand just one thing.... "If we are not to lose you on the ground, "Try not to lose yourself."

I do not guarantee the accuracy. The words, as you see, are nothing great, God knows, but you know how something sticks in your mind and nags at you....

[Pleshakov] Certainly, the words evoke associations in you....

[Abalkin] Probably. The first period has been played, strength has to be found for the next one, strength not merely to play, but to win.... And at the same time try not to get lost.... Remain yourself. This latter is especially important....

[Pleshakov] Leonid Ivanovich, I would like to go back to last fall, when the USSR Supreme Soviet approved the budget for the current year. At that time, as far as I recall, a budget deficit was announced for the first time in our history—35 billion. An announcement, as they say, that was not one of the more pleasant ones. But in literally a few weeks journalists began to refer in their articles to another figure—100 billion. This summer, it was officially acknowledged: the total deficit in the 1989 budget is 120 billion.

Would you tell us where that pluralism in calculations came from? And to what extent can we believe them if even in such a serious matter as the deficit in the state budget they have had a 300-percent discrepancy?

[Abalkin] It is all explained rather simply. Last year, the decision was made for the first time in many years to state publicly the deficit in discussing the state plan and the budget for 1989. There were very serious debates of this topic. On the one hand, everyone understood glasnost, openness, the people had to be told the truth, but on the other hand, everyone was afraid of an explosion. After all, budget deficits were usually "over there," "in their country," while everything was always fine with us. It was thought that if we finally announce that everything is not in order with us either, the world will fall to pieces, panic would set in, and the foundations would shake. And this announcement was unexpectedly received with utter indifference, there was no reverberation whatsoever. The deputies raised their hands to approve the budget. Journalists began to comment on this event about a month later.

[Pleshakov] Is it possible that the deputies did not understand what kind of event had taken place?

[Abalkin] Perhaps they did not understand, perhaps they were not fully aware. The most likely thing is that they felt that what was reported to them was what had to be done. So, when you think about it—a deficit! The state will collect it and add it in—where is the problem?

At the same time, tactical caution was displayed in the report, and the addition of the amounts was bent to that purpose. The pure deficit—I will speak in round figures—was 35 billion rubles. This is a hole in the budget not covered by anything. And it was referred to by its own name. There was also a concealed hole in the amount of 65 billion. This is money which Minfin withdrew from the State Bank. This is money you seem to have, but it is not yours, you have not earned it, in time you will have to pay it back. Throughout international practice and in scientific logic, this is state debt. Its deficit was balanced against this amount, but not with its income, but a loan. To be sure, this amount was also named, but separately: the borrowing of funds from the Gosbank loan fund. For those who do not understand the details of finance, this terminology meant nothing. Specialists immediately understood everything—and that is when the figure of 100 billion rubles began to parade through the pages of newspapers and journals.

And now that the new plan and budget are being drafted, a decision was made in the government to point everything out: the uncovered deficit, the deficit covered with the loans from Gosbank, and also the loans from Sberbank. That is when the new figure emerged of 120 billion. The agreement reached in this connection was that we would use one and the same method in computing the budgets of coming years and years in the

recent past. Otherwise, we cannot make comparisons of the state of our finances in the past, the present, and the future.

[Pleshakov] Well, the past is already past, but how do things stand in the future, how much do we have left to live on?

[Abalkin] The government has been taking steps to make it possible to reduce the deficit slightly even during this year. Its size has been set at 60 billion next year, that is, only half the size of this year....

[Pleshakov] And where will these 120 go?

[Abalkin] They will go to the growth of the state debt. Taking past years into account, it amounts to approximately 300 billion. This is not a pleasant thing, but we did not invent it, it exists throughout the entire civilized world. If you want to eat more and spend more than you earn, you are sure to have a debt. That is a law.

What will be new at this point about our relations with the budget and the deficit? Even in the coming year they must take on a civilized form: the promissory notes of the state at 5 percent per annum and a term of approximately 15 years. The state will reimburse the holders of the securities those 5 percent every year and it will redeem the entire amount over 15 years. Though it may not redeem them, but may replace them with new securities. As you like, you can take the money, you can obtain new notes.

There is another fine point here. The rate of interest on the state's notes will be lower than the interest that a commercial or cooperative bank will be paying. But! The state guarantees its notes to the amount of all its property. I will always get back from it what I put in. But in relations with commercial or cooperative banks, there is an element of risk. In the hope of obtaining 2 or 3 more percentage points per year, I am at the same time risking the entire amount.

All world practice is based on this. We still have not adapted to these relations, we are just going through the preparatory and initial classes in the financial and commercial system, the securities market, and stock exchange transactions. All of this is still in the future for us: and mistakes in calculation and disappointments and the ruin of commission banks. But there will be all of that to a greater or lesser extent. The main thing is what we have a duty to preserve no matter what—confidence in the state and its notes.

There was one action in our history which is not particularly remembered now, but its influence has simply stuck at some subcortical level in the people's memory. In the monetary reform in December 1947, we exchanged cash in the ratio of 10:1. But balances in savings banks were exchanged up to 3,000 at a rate of 1:1. This unusual action encouraged savings depositors, who during the most difficult years of the war believed in the strength of the state, helped the country to finance

the fight against fascist aggression, to finance our victory. And that confidence in the state savings system has remained. Everyone knows that the 2 or 3 percent paid on the deposit is not such high income. But neither thief nor pestilence will have any share in that money. The state will still return it. This element of confidence is a piece of good luck in our most difficult time, when everything is collapsing. This is the state's good fortune, that the people still believe in it, believe that there will not be a monetary reform, that in this context it would be illogical and nonsensical. And if all that money were to pour out onto the undersupplied market—it would be a disaster.

[Pleshakov] Leonid Ivanovich, how in your view will the reform develop? After all, we have already played the first period, to use the metaphor you proposed, and so far there have been no appreciable results. More accurately, they are very appreciable, but so far only on the negative side. The consumer market is out of balance. Many production indicators have dropped. People have begun to earn more money, and to do poorer work. And the decisions made and decrees adopted earlier, but in the period of perestroika, have furthered this to no small degree.

Unfortunately, we have been unable to completely free ourselves of the legacy of past years, of the methods of the particular problems that had compromised themselves and condemned us. For example, our magazine received a complaint from the Zhlobin Metal Fabrication Plant, which was built with the help of an Austrian firm. The ministry assigned a state order at 95 percent of output. Thus, the enterprise is deprived of the possibility of seeking profitable trading partners and customers abroad in order to acquire imported equipment in the future for the foreign exchange it earns, when that equipment is necessary to the plant's reconstruction, to the updating of production. In 6 or 7 years, the need for that equipment will be extremely acute. But to obtain foreign exchange you have to go to the ministry with your hat in your hand. There is a question of whether there is enough money there. In short, a headache is planned in advance for both the ministry and the plant.

Or take the story of the plant making low-power cars in Yelabuga. The announcement of its construction aroused universal enthusiasm. And then a decision was also made to issue bonds to build the plant making "people's cars." To be sure, this idea was soon abandoned. But I do not want to talk about this kind of rashness and easy promises concerning the brilliant prospects in the immediate future. I want to talk about our megalomania. How many times have we been burned by this, and then we fall into the same trap all over again. After all, a plant to produce 900,000 cars a year, which the plan called for, is actually a complex of some 15 or so plants. This is a city—it resembles Togliatti or Neberezhnye Chelny—of 500,000-600,000, with all the infrastructure for everyday and social services. At present, we are still building all this, the car model is becoming old, and our needs for it are also

changing. Would it not have been more reasonable to build a network of small assembly enterprises in existing settlements? They are more flexible, they can retool faster for a new product, and they can be put in operation more rapidly....

[Abalkin] All that is so. But what are you going to do if Yelabuga represents the initial construction of a tractor plant—that is a legacy you cannot give up. How can you throw it away—all those hundreds of millions of rubles? And everything related to the state order is not as simple as it appears at first, nor is it all that easy to work out as we would all like. In many cases, of course, it is possible to substantially reduce its percentage of output. But then many relations which have been formed over decades would be severed. And that could result in chaos....

Unfortunately, it is not possible to change everything in one sweep, even if that is what we all want very much.... We are always in a great hurry. We often trim back right to the flesh, without thinking about the consequences. And usually this does not halt the adverse processes, but only strengthens them and speeds them up. Even in recent years one could give a great many examples.

To talk about the reform, it is now entering a new stage of its development: the normative and legal basis of new economic relations is being laid. In August, the government drafted and on 1 September submitted for consideration of the Supreme Soviet a whole package of laws: on property, on land and land use, on leasing and leasing relations, on the unified tax system, and the new law on the socialist enterprise.

But that is only the beginning, so to speak, the initial pieces of legislation prepared by order of the Supreme Soviet. Now, the government is preparing an integral program for further actions to restore the economy to health. They have to do with financial recovery and the prospects for the country's economic and social development, and stages in the further development of the reform itself are also defined. Today, now on our own initiative, not on assignment of the Supreme Soviet, we are drafting bills on joint stock companies and banks. We have come to the conclusion that we need a law on a securities exchange. When the loans we have talked about come out, securities will begin to circulate. That means we need to organize a securities market, to set up a securities exchange, to define the conditions for its activity, and finally to train personnel who would be able to administer this entire new effort for us.

We are also preparing materials related to antimonopoly legislation. The Economics Institute of the USSR Academy of Sciences is to submit to the Council of Ministers a report on how to combat the manifestations of monopolism in our country....

Another law being drafted entirely on the initiative of our commission is the law on small enterprises. We have called upon a number of scientific research institutes to prepare their pros and cons on this subject. There will

also be measures against monopolies, and what even Western theoreticians know about, but do not right about: antistrike measures.

Just think, the country's only plant making cigarette filters is operating in the Transcaucasus. If it shuts down, the consequences will be worse than those with soap: All the tobacco factories, which depend on its deliveries, will shut down. This will cost the country several million rubles of foreign exchange, since the filters will have to be purchased on the world market. We will not be able to shut down the production of cigarettes, since that would hurt our consumer market, consumer sales, and the turnover tax. We should have a dozen plants with a total capacity equal to that one plant in the Transcaucasus, then a strike at the latter would not be so sorely felt: its order could be distributed among the other enterprises....

[Pleshakov] Yet it is possible that there would be an agreement of the entire branch on a strike simply out of solidarity with comrades in the same industry....

[Abalkin] That is possible in principle, but difficult to carry out. Yet, in debating the importance of small enterprises, we must remember not only production efficiency, but also their ability to switch from one product to another at a fast rate, to react quickly to the demands of the market.

When I visited Japan, I was always amazed that in such an industrial country, with such an extremely high level of automation of production, where the most up-to-date technologies are used, along with the large plants there are an immense array of small enterprises, tiny stores, little restaurants where the work is done with primitive implements, virtually without any mechanization at all. The state nourishes them with various subsidies, since they are necessary to absorb various economic shocks. In general, when we examine the economic system of the West, we for some reason see only the giant concerns with rigid internal discipline, when there is no independence of the subsidiaries. And we somehow forget that that entire system stands on a foundation consisting of flexible and mobile small enterprises.

That is why we decided to draft a program to that effect. I do not think that this will be an easy problem to solve, however aware we might be of its necessity, because it is not so simple to break down into its parts a technological process that has taken shape. For example, how are you going to make several plants from ZIL or GAZ? I am not even sure that this should be done. But in my opinion one of the promising directions for the future is to create diverse and flexible forms, structures, and so on.

[Pleshakov] What in the end is an economic reform? A number of laws have already been adopted, the adoption of several more is coming soon. And in the conception of your commission, as far as I have been able to grasp, there is an unending multitude of them....

[Abalkin] A reform is a process. A very lengthy process....

[Pleshakov] A return to reasonable management of the economy?

[Abalkin] I do not think that it is a return.... It would be more correct to say: acquiring optimum forms of management of the economy.

Soon after the 27th party congress, I gave an interview in which I said that the reform is a lengthy process whose completion can be expected by the year 2000. Judging by the responses, this raised a lot of dust: "What is this, people said, that Abalkin is asserting?" Many people accused me of pessimism. That was the position taken by Valovoy, deputy chief editor of PRAVDA. I met him recently, and he referred to that interview of mine and said:

"I thought you were a pessimist, but it turns out you are an incorrigible optimist. Do you actually believe that everything that has been outlined is realistic by the year 2000...?"

I have always argued desperately with those who called for and promised entry into the 13th FYP with an economic mechanism already tuned up. Do you remember all those declarations? I would argue: Do not deceive yourselves and others!

Behind the term "new economic mechanism," there stand immense economic layers which have to be peeled back, and beyond them another structure of production, another system of relations. Let us suppose that you want to introduce land leasing relations. But to do that you have to build the plants that would be able to manufacture the equipment needed by the lessees, and do so in quantities that correspond to their needs. There has to be a change in psychology and in the stereotypes of thinking both on the part of the peasants themselves and also in the attitude toward them. That will take years. I ask: "How do you propose to do this?" "All of us together," they reply, "have to make an effort, exert pressure, and buckle down."

Words simply fail.... I have never been a gloater. To say I told you so, I warned you, and you did not listen.... On the contrary, I have always hoped for success. But one must look at things realistically. Now, people ask me: "And will you actually turn in your resignation in 1.5 years?" I do not want to resign in 1.5 years. In 1.5 years, I want to say: Things have moved off dead center. The process of deterioration of the situation in the economy has ceased. Now, we will start going forward....

[Pleshakov] So far the deterioration has not ceased?

[Abalkin] Not so far. The situation in the economy continues to deteriorate with every passing month. I can back this up with facts and figures wherever you like, however you like, and in whatever capacity....

[Pleshakov] Still, you do see a halting of that process in the future? But is it not possible, Leonid Ivanovich, that some sort of new situations might arise that you are not calculating on at present? Who could have supposed just

a year ago, say, that strikes would be threading through the country? Now, there is talk to the effect that if by the year 2005 we reach the level of labor productivity they have in the United States, and we all want to work just as productively in our own country—we will have an army of the unemployed numbering 40 million. It is not difficult to imagine how that would complicate the situation in the country....

[Abalkin] There was a lot of juggling involved in those calculations. Begin with the very idea of the possibility of performing that task in such a short time. But then there is also the computation, which is not altogether correct: they are comparing the volume of production realistically forecast in the year 2005 with the American level of labor productivity. That is the comparison that yields 40 million extra workers.

The real relationship is this. Last year and the year before last, we eliminated approximately 1 million jobs. That means by the year 2000 we would eliminate approximately 12 million more jobs in the sphere of material production. That is the estimate of our institute, arrived at in a sufficiently professional manner. Which leads to the next problem: providing jobs for the workers discharged in the service sector or other fields of activity, and doing the relevant retraining of personnel.

Now, a second process arises, one which so far has not been registered: some of the workers discharged have already been absorbed by the cooperative sector, and in the near future leasing in agriculture will be doing the same thing. Under certain conditions, it might cause a sizable exodus of workers from the city to the country. The creation of family farms in Central Russia, the thorough processing of products locally—all of this will create favorable conditions for using the manpower made available. The example of the cooperatives convinces us of the correctness of this conclusion. Everyone supposed that they would attract housewives and retired people. But it turned out that those most anxious to go there were the workers of state industrial enterprises and construction projects. In other words, significant structural changes are taking place in the work force. So, that was an unanticipated turn of events. We must also take into account that the process that has been outlined would take place rather painlessly. It is, of course, a serious question, but not on the scale that certain economists have predicted.

But now another problem has risen on the horizon, one which could become acute and could be very appreciable even in the coming year. Everyone acknowledged that it was reasonable and fair to reduce productive capital investments. But! The direct transfer from the sphere of industrial construction to the sphere of housing construction is not taking place. We are cutting back construction somewhere in Tyumen Oblast, but we want to employ those people in Rostov-na-Donu, Volgograd, Voronezh, and Gorkiy. That means that they have to be

resettled, traveling allowances have to be paid, housing has to be provided at the new place, otherwise we will get nothing from it....

And this, as you understand, led to realization of yet another problem. There is one very important link missing in our economic mechanism: in the decision-making system there is no element for assessment of the possible consequences of the decisions made. When we make a decision to cut back the production or sale of wine and liquor or to establish a tax on cooperatives, we do not trace out the possible social consequences of such decisions. The absence of the elements of assessment and forecasting of the possible results has in fact given rise to decisions which have not been scientifically prepared, which will soon have to be revoked, because they are resulting in things which seem to be obvious, but obvious only after they have given evidence of themselves.

There are two ways of incorporating an estimate of the subsequent results in a decision-making mechanism. The first is the method of situation analysis, which is conducted by research institutes. The second is to study public opinion concerning the projects in question. We are now organizing an effort in both directions. And I must say that there is an immense need for such research in the country's economy.

For example, the question of the position of the manager in the enterprise has become very acute. We are now carried away with the latest in a series of innovations: competitive elections. No question about it—it sounds and looks fine...and at the same time it will result in a professionally trained team. We trained an enterprise director in the Academy of the National Economy. We sent him abroad for practical training, he learned a foreign language, we taught him management and marketing...but the collective of the plant just would not elect him. They elected their own man, someone they knew, more obliging, someone who would not be hard on the work force. So now what we want to understand is how various groups of the enterprise's workers look upon the various forms of appointment of the manager: the workers, the engineering and technical personnel, and the employees. What do they prefer: appointment from above or a recommendation and subsequent election in an assembly of the collective? Elections with one slate of candidates or an alternative slate?

[Pleshakov] All that is fine, but this is all talk about the future. The present difficulties are stifling us today. What patience is left is being exhausted. Will it not turn out that we get tired of waiting and again give it all up, cut off the oxygen to the reform, shut down everything, and start the movement backward? At least we have experience....

[Abalkin] That is one of the possible directions in which events might develop....

[Pleshakov] One of the possible.... Which means that you do not utterly reject a return?

[Abalkin] I do not want to even discuss that topic. Going back would mean disaster....

The other day, I spoke in the scientific council of my institute. For the last 2 months, I have been so involved with my new job in the Council of Ministers that it simply was not possible to get away to see my colleagues. I had not been there for a week or 2, but my deputies somehow persuaded me to come and speak. I told my comrades what the commission was working on, what its plans were. But when it came to an analysis of the situation in the country's economy, not desiring in the least to make the situation more tense, I nevertheless said:

"An absolute reduction is taking place with respect to all indicators. There are hundreds of trains on the railroads waiting to be unloaded. At other places, there is a shortage of cars to carry away the harvest. Grain and potatoes are spoiling.... Fuel for the winter is not being carried. Certain regions are in the ring of an economic blockade. Sooner or later, all of this will explode. Strikes have cost the country approximately 3 billion rubles. The government does not have the money to make up that loss. We either have to put an additional tax on the entire population, collect 10 rubles from every person, young or old, or open the shark's jaws of the budget deficit still wider, adding another 3 to the 120 billion it already contains.

"We, the government, are asking for 1.5 years of quiet work. Let us work a bit, and then ask about the result. They are not allowing it, first one thing and then another."

And I said all this, I went on talking, and then I said in conclusion: "I do not know of a situation in history when a government proved to be in a more complicated situation. It cannot halt the strike, it cannot get the trains through Azerbaijan to Armenia, and in the other direction."

At this point, Viktor Nikolayevich Bogachev interrupted me with a remark:

"But I can suggest to you a historical analogy, Leonid Ivanovich: it is Germany in 1932."

"God forbid," was all I could manage to say....

[Pleshakov] Leonid Ivanovich, back in that interview in December you said that you favored emergency measures. Would that extend to those proposed by certain scientists—Nikolay Shmelev in particular—purchases of imported goods on the world market and stabilization of our domestic market in that way? If the tension in the trade sector were lessened, it might be possible to solve all the rest more calmly....

[Abalkin] First of all, selling off national property is not the best way. It is dishonorable to eat up what people before you have earned, not to mention leaving debts for your children. But here there is something that is even more essential: This is the method of correcting our

shaky affairs by means of that very principle of sharing which you and I have condemned. It gives rise to groundless hopes. It gives rise to the illusion that it would be possible to improve the situation without working, without changing our attitude toward work, without creating anything. Suddenly begin to live better—and that is all. Although those measures could replenish the market, they would deal the most serious blow to perestroyka, they would have social consequences which would begin to hold it back in the future. The creation of new illusions—at one time or another Yugoslavia and Poland went through this when they took large loans justified by rosy prospects in the future—is fraught with the most serious consequences.

What is more, additional loans will sharply undermine confidence in our state's creditworthiness, and that will be used for political and economic pressure on us. This will worsen terms in credit financing, it will force us to pay a higher percentage and agree to all kinds of concessions. Our large purchases of goods in the West will immediately bring sharply inflated prices on the world market. And we will be able to purchase a smaller quantity of them for the same amount of money.

Shmelev's proposal does not take into account the realities of the world market or the lust of those who surround us. We have been somewhat carried away by the relaxation of the international situation: What good people there are all around, good people who desire success for our perestroyka. Yes, they do wish us success. But no one will lose sight of his own interest. There is no point hoping for that.

What can realistically be done is to regroup the resources earmarked for imports. Once we have decided to halt certain construction projects, that means that the funds planned for industrial equipment have to be released for drugs, medical equipment, and consumer goods. This kind of maneuver is already being negotiated. I think that its result will soon be felt by our consumer. There are also a number of measures which could ease the situation on the domestic market. But to enter into expansion of our indebtedness to foreign creditors is a method that is not allowed.

I say this although I am absolutely convinced that Nikolay Shmelev is one of our most serious economists. His speech in the Congress of People's Deputies was one of the most profound and meaningful. But this point in his proposal seems to me unsound. We must not build illusions to the effect that our life can be improved at someone else's expense. We have to build our own prosperity with our own labor. There simply is no other way. We are living no worse than we are working. I said this in the session of the Supreme Soviet. I can repeat it now. The country will have the kind of economy which we build. If we are able to work in a new way, then it will take on a new quality.

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## Plants' Experiences with Defense Conversion Discussed

### Plants Assess Changeover

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in Russian No 18, Sep 89 p 10

[Reports by TASS correspondents Ye. Savinova, G. Kokukhin and Ye. Tkachenko under "With No 'Secret' Stamp" rubric: "Conversion—Action!"]

*[Text] In its last issue, PRAVITELSTVENNYY VESTNIK published an interview with CPSU Central Committee Secretary O.D. Baklanov. The conversation, in particular, was about the political and economic necessity of the conversion of the defense production in our country and of switching part of the capacity of the defense complex to the production of consumer goods and output for civilian use. The readers are turning to the editor's office with the request for more specific information about how defense enterprises are approaching conversion. On behalf of the editor's office, TASS correspondents visited three plants, where the transition to the issue of nonmilitary products must take place in the near future. We are publishing their reports.*

### Seven Feet Under the Keel!

It was quite recently that even the enterprise workers could enter this shop of the Leninskaya Kuznitsa Plant only with special passes: the production was secret. But now the building slips are already being prepared to accept fishing industry trawlers and seiners.

They propose to carry out full conversion at the enterprise by 1992 and the collective has much to do, difficult work, about which they are talking quite frankly at the plant.

"True," said acting enterprise director V. Sopryazhinskiy, "previously we also built fishing boats and dredges along with 'defense material.' The technology is known, there will be no substantial change in labor intensiveness, and the expansion of the production of new output will not be too much of a burden on us. A more important question is how precisely to fill the capacities that have become available so as not to lose profit and therefore earnings. Specialists from the plant's central design bureau developed projects for a medium-sized fishing trawler and a small seiner intended for the Baltic and North seas. The technical specifications of both boats meet the most up-to-date requirements. Talks are now under way on the signing of a contract for the delivery of one such boat to the GDR."

As calculations showed, however, all of this is too little to keep the total profit at the "pre-conversion" level. This is why they intend here to bring about a significant increase in the production of goods for the people. As early as next year, its volume will increase by a million and a half rubles in comparison with the current year. At Leninskaya Kuznitsa, they even decided to put up a new shop

for consumer goods. Its construction will be one of the links in the complex reconstruction of the enterprise, which was made necessary by the conversion. Because now, instead of one military vessel, let us say, the plant will have to produce several industrial ships. This means that the equipment will be used more intensively.—Ye. Savinova, Kiev.

### The Plant Is Changing Its Profile

This small kitchen machine will do a lot: chop cabbage and slice bread, grind coffee grains and knead dough, squeeze juice from berries and prepare stuffing for cutlets....

"Along with other consumer goods, we will produce such a processor instead of military output," relates N. Babichev, deputy director of the Yoshkar-Olinskiy Machine Plant. "It has been decided to give our enterprise a completely new profile beginning in 1991...."

Will the plant experience losses from conversion? Yes, and there are two ways to make up for them and to preserve the collective. The first is to increase the production of bicycles, which was developed along with the basic production. In 1990, the enterprise will increase the output of two-wheeled vehicles to 700,000. The second way is the assimilation of new and nontraditional product, specifically the organization of the production of a kitchen processor.

"But we will have to overcome many serious problems," continues N. Babichev. "They are proposing to us, for example, that we increase the production of bicycles by more than 20 million rubles but many suppliers are not prepared for this. They are having trouble meeting our current requirements. Thus, there are preliminary agreements on only 3 of the 19 completing products for 1990! We are being let down in particular by subcontractors from Khabarov Kray, Voronezh, Kirov and Daugavpils that are supplying the plant with aluminum sections, bicycle tires, pumps and chains. But the Mariyskoye Territorial Administration of USSR Gosnab does not take into consideration planned growth."

A special subject in all the conversations having to do with conversion is the preservation of the privileges of those who are now employed in specialized production. Otherwise some of the people will leave the enterprise. But such a thing, they think at the plant, cannot be permitted in any case. For it is a matter of highly skilled workers with exemplary diligence and discipline.

Extensive use is being made of new management methods to keep personnel at the enterprise. Here, for example, we have organized a production cooperative of foundry workers called "Plamy." The average monthly wage of the cooperative workers is 600 rubles. Prior to the establishment of the cooperative, the plant was forced to enter into contracts with the Kama Motor Vehicle Plant and other enterprises for the delivery of

cast material. The situation is now quite different: the cooperative continuously supplies all of bicycle production with its output.

"Not only good wages but also full economic independence are creating interest in the matter," affirms N. Lisov, chairman of the cooperative. "We are prepared to provide high-quality cast material for the production of a million bicycles a year...."

"Precisely the introduction of cooperatives and leasing—and these forms of the organization of labor are already in operation in the shop for nonstandard equipment and in the plastics and repair-construction sections—will make it possible for the plant to overcome many difficulties brought out by conversion," comments A. Tur, chief of the technology division of the textile research institute of the Ministry of the Defense Industry. "As for the technical area—project planning, the development of drawings for equipment and products and the issue of the necessary procedures and recommendations—there are no questions here. Our institute is controlling the preparation of the plant for reprofiling and is prepared to give it any assistance that it can."—G. Kokukhin, Yoshkar-Ola.

#### Although the Prospects Are Clear

The production of specialized output and the assembly of new equipment for the manufacture of components of a home refrigerator are taking place simultaneously under the roofs of a number of leading shops of the Yuryuzanskiy Machine Plant imeni S.M. Kirov. And the area for "defense production" is being reduced systematically. Beginning in 1990, the enterprise must shift completely to the production of peaceful items.

This is a complex process. Many troubling problems are arising.

"In the current year, for example," says plant director A. Sapozhnikov, "there are simply no centralized appropriations for industrial construction and technical reequipment, which, strictly speaking, are supposed to convert the material base."

The issue of Yuryuzan refrigerators, which are in great demand among the population, was organized in adapted premises. It is incredibly crowded there and under such circumstances it is simply impossible to think about increasing the output and raising the quality of products. This is why the reorganization of the production of refrigerators and the construction of new facilities worth 10 billion rubles began even before there was talk of conversion. It would seem that today it is necessary to work with the maximum effectiveness here. But the Uzhuralmetallurgstroy Trust has fulfilled less than 50 percent of the plan. But at its fault equipment valued at a million rubles has awaited assembly at this most important facility since last year.

"If things keep on going this way, it will be difficult to find jobs for workers and engineers being released from

'defense production,'" states the director, "although for the long term we calculated full employment of all personnel and basically without loss of wages. We will increase the output of refrigerators. A new model is being developed that will have improved performance characteristics. Knowing our high technical potential, representatives of the processing industry of agriculture turned to us. A design group and a new section where production that we are not accustomed to is being assimilated have been established to fulfill their orders."

"But the biggest question is the social question," said Yu. Vilkov, chairman of the council of the labor collective. "It is especially disturbing to those who are preparing to be pensioned under privileged lists for work in dangerous production. We made the corresponding proposals to the USSR Ministry of the Defense Industry, USSR State Committee for Labor and Social Problems and AUCC TU. It is necessary to compensate for possible losses! In general, however, the appropriate decision needs to be made even before the confirmation of the conversion schedule...."

And about still another problem. For some reason, the agitation and concerns having to do with the reprofiling of a portion of the military enterprises affected only them. And what about the suppliers? For it is no secret that today the conveyor for the assembly of refrigerators is continuously feverish from the untimely delivery of compressors and electric motors. What will happen when the people at the Yuryuzanskiy Plant are able to issue substantially more household equipment?—Ye. Tkachenko, Chelyabinsk Oblast.

#### Military Industrial Commission's Views

904A0019B Moscow PRAVITELSTVENNYY  
*VESTNIK* in Russian No 18, Sep 89 p 11

[Commentary by V. Komarov, department head of the State Military Industrial Commission of the USSR Council of Ministers]

[Text] The defense complex produces much output for civilian use and consumer goods. Their relative share in the total volume of production is now 40 percent. It will reach 49 percent in 1990 and will exceed 60 percent in 1995. As early as 1990, it is planned to begin to carry out conversion at half of the enterprises of the defense complex. It can be said that these are the basic parameters of the state conversion plan, the elaboration of which must be completed in the fourth quarter of the current year.

The plan is still being elaborated but the conversion has already started. In 1989, for example, the output of military equipment will be 95.5 percent of the level of the past year, even though it was previously proposed that it be increased by 5.5 percent. On the other hand, the production of civilian output will increase by 8.9 percent this year (an increase of 5.7 percent was planned). In the coming year, the production of civilian

output will be 13 percent more than in the current year and that of consumer goods will increase by more than 30 percent.

The following figure is also rather interesting: the defense complex is already issuing about 22 percent of all nonfood consumer goods produced in the country (not including the production of light industry). Of them, it issues 100 percent of the televisions, video recorders, sewing machines and radio receivers, more than 97 percent of refrigerators and more than half of the motorcycles. It is anticipated that in 1990 the defense complex will increase the manufacture, for example, of washing machines by 36 percent and vacuum cleaners by 25 percent and that the production of televisions will exceed 11 million units. In the process, of course, subcontractors must ensure the corresponding increase in deliveries of materials and completing products for enterprises of the defense complex that are expanding peaceful output. For the time being, as we see from the reports received by PRAVITELSTVENNYY VESTNIK, there are not enough completing products even for the current volume of production.

If we speak of the priority directions in the utilization of the production potential now being freed from military orders, they include production of equipment for the agroindustrial complex, for trade and public catering; the manufacture of consumer goods; the production of electronic, computer and medical equipment and the means of communication; and the civilian construction of aircraft and ships. It is planned in the next five-year plan to double the output of production equipment for the agroindustrial complex. In 1995, it will be given at 3.8 billion rubles—82 percent of all that is produced in the country. It is foreseen that in 1995 the defense complex will produce 2.3 billion rubles in production equipment for light industry, which is 87 percent of the national volume. The picture is analogous in other priority directions, as mentioned above.

There is a prevalent opinion that the "defense industry" can and must participate in the realization of practically all programs for social and economic development. But there are at least two reasons why this cannot be done.

In the first place, it would be strange if enterprises with high production standards and the richest technical and technological traditions used this unique potential, for example, for the establishment and production of garden implements for the members of suburban cooperatives.

Secondly, the possibilities of the defense complex are not unlimited. Thus, the value of its fixed capital is just 6 percent of the value of the production capital of the national economy as a whole.

The participation of the defense complex in the realization of a broader range of tasks of a nonmilitary nature will require a drastic renewal and modernization of fixed capital. But the strained financial situation in the country simply does not permit this to be done. Because even at the enterprises that will be encompassed by

conversion in the coming years, as is apparent from the reports of the TASS correspondents, the workers are concerned about the shortage of funds for the renewal and reconstruction of fixed capital. And the tasks ahead are somewhat more complex.

In short, major capital investments and the corresponding material and technical support are necessary for reprofiling, technological equipment and preparation for the new production of output at enterprises subject to conversion. At the present time, the magnitude of these means and resources are being calculated by the ministries and, with the help of USSR Gosplan, they will be determined in the draft plan for the conversion of military production.

Preliminary studies already indicate that a significant share of the appropriations that will be freed in the process of conversion must be spent on the restructuring of technology, the transformation of equipment and instrumentation, the updating of production and the retraining of personnel. Additional complications are also linked with the fact that by and large it is planned to carry out the reorientation of capacities without stopping production. This is one of the most complex questions. Naturally this transition will be less painful at such enterprises as, for example, the Leninskaya Kuznitsa Plant. But the Yuryuzanskiy Machine Plant experienced serious difficulties and obviously is continuing to experience them because of the slow pace of construction.

At the same time, it is obviously necessary to draw the attention of the ministries and departments of the country's national economy and of the USSR Ministry of Defense to a more efficient utilization of the equipment being released in connection with the reduction of the army.

The expansion of the production of peaceful output also requires—and the workers of the defense enterprises taking the course of conversion are talking about this frankly—that supplemental means be found for the compensation of unavoidable losses in wages. The economic incentive funds must be maintained in their previous volume. Otherwise skilled personnel may be lost. For this reason, the State Military Industrial Commission of the USSR Council of Ministers intends to prepare, along with the plan for conversion, a number of proposals on questions involving the employment of workers from defense branches, their retraining and the payment system in this period, and the granting of pensions.

The rational utilization of the scientific potential of defense branches is extremely important. It is planned to preserve the capacities of research and experimental design institutions being released from the development of arms and military equipment, changing the direction of their work, of course. As early as this year, 250 production processes and 130 types of progressive equipment have to be turned over to civilian branches. But this work must be systematized: establish control over

the transfer of technology and think through the questions of the personal interest and responsibility of the sides. It is proposed that in the 13th Five-Year Plan expenditures for research and experimental design work on civilian subjects (ministry budgets, agreements with customers, own sources) increase an average of 4 percent a year. This is no longer the notorious remainder principle that for many years has been "restraining" the creation of new civilian products and goods for the people.

And one last thing—in order of mention but not of importance. A most important task that remains is the support of the level of defensive sufficiency and the ensuring of a high scientific and technical level of military equipment.

[Boxed material] The issue of complex household appliances will reach the following levels in 1995:

Televisions—15 million units (increase of 34.2 percent over the level of 1990), including 12 million color televisions (increase of 62.6 percent); refrigerators—9 million units (increase of 32.4 percent); sewing machines—3.5 million (increase of 84.2 percent); washing machines—7.2 million (increase of 21.5 percent); electric vacuum cleaners—7.0 million (increase of 32.1 percent); video recorders—2.3 million (increase by a factor of 5.1); motorized blocks and motor cultivators—660,000 (increase by a factor of 2.6).

#### More on Merging of Metallurgical Ministries

18200474 Moscow PRAVITELSTVENNYY VESTNIK  
in Russian No 22, Nov 89 p 1

[Article by S. Kolpakov under the rubric "You Have the Floor, Comrade Minister": "We're Restructuring the Organization"]

[Text] It's impossible to manage the huge and complex metallurgical complex by old methods. In the last 2 years a reorganization of the ferrous and nonferrous metallurgical ministries has reduced their staffs by 2,300 people, or by 44 percent. Now this reduction has reached 53 percent. I am convinced that the central staff should first of all fulfill the role of the ministry as part of the state administration.

While forming the central staff of the USSR Ministry of Metallurgy, we envisaged merging the subunits of the two former ministries, which used to fulfill similar functions. The number of independent subunits was reduced from 52 to 27. Instead of the former main administrations, we have created departments as the basic structural subunit. This will permit us to simplify the organizational structure of the central organization and to ensure the transfer to a two-tier system of management.

The staffing process is taking place openly, with the participation of social organizations. Party committees of the former USSR Ferrous and USSR Nonferrous

Metallurgical Ministries have created a joint commission which reviews the nomination proposals. I have to say that far from every proposal gets through; the professional requirements for candidates are very demanding and strict.

Unfortunately, we don't have a new statute for the ministry, even though we are restructuring the work and determining the basic principles of the central organization's activities. The drafting of the statute has dragged on, and the reorganization began without this basic document, in which the ministry's rights under the new conditions, and, most importantly, the economic mechanism by which they are realized, should be clearly laid out.

#### Leningrad Obkom Chief Interviewed on Science, Economic Reforms

18140320x Moscow POISK in Russian  
No 15, 1 Aug 89 p 4

[Interview with Corresponding Member of the USSR Academy of Sciences Boris Veniaminovich Gidaspov, USSR People's Deputy and first secretary of the Leningrad Party Obkom, by POISK correspondent Arkadiy Sosnov, under the rubric "The First Interview" (Leningrad): "A Horizontal Breakthrough"; date not given; first paragraph is POISK introduction; passages in boldface as published]

[Text] USSR People's Deputy, Corresponding Member of the USSR Academy of Sciences, and First Secretary of the Leningrad Party Obkom Boris Gidaspov reflects on restructuring in science, in the economy, and in the party.

**POISK:** Boris Veniaminovich! As far as I know, although it was the morning following election to your present post, on the way to work to Smolny you dropped in at the State Institute of Applied Chemistry. It would be interesting to find out why: to give last instructions or to say a last "goodbye"?

**B.V. Gidaspov:** Neither. I do not intend to give up the search for new forms of the organization of the economy. The establishment of interbranch state associations (MGO's), or so-called concerns, is also one of them. Of course, I will no longer be able, as before, to deal with the settlement of day-to-day questions. But as for the development of the concept of interbranch state associations, the strengthening of horizontal relations among enterprises, and the development of interaction with the system of planning, investments, and material and technical supply—in this I will try to participate without fail, understanding that **without party support progress toward a new economy will be slower and more difficult**. So that "goodbye" was not said.

**POISK:** It would be worthwhile to talk a little precisely about the concept of interbranch state associations. In my opinion, in its development it is passing through the

stages that are typical of any scientific idea. First "this cannot be," then "there is something to this," and finally "who does not know this?"

The idea that an enterprise or group of enterprises would not obey anyone or anything except the law, seemed seditious 2-3 years ago. And much civic courage was required to voice it, and especially to defend it. It was believed that the vertical management system is the best, we simply did not deserve a different one. The idea of a consortium of enterprises could not have originated in the midst of the apparatus, because it deprives the apparatus of power over enterprises. But why did precisely you become its zealous supporter? After all, I believe, the State Institute of Applied Chemistry was not in very bad repute in the ministry, was it?

**B.V. Gidashev:** By no means. This was a very privileged organization. It had (and today has) great resources and a powerful scientific and technical potential. It was impossible to complain of a lack of attention to it of both Leningrad and central organs, including the USSR Council of Ministers. But that is not the point!

Life itself, rather the urgent reorganization of the economy, particularly the adoption of the Law on the State Enterprise, prompted the organizers of the concern—they were the directors of large chemical and machine building enterprises—to seek new forms of integration. Concerns are the emancipation of enterprises, their release from ministerial fetters, and the possibility of the cooperation of ideas and assets. All this is correct. However, the popular opinion exists that we strove to break away from the tutelage of ministries in order to find an easy life. In reality, on the contrary, our life was complicated by the necessity to be concerned about ourselves—about orders, about sales markets.... And, however paradoxical it sounds, we attempted in our own way to make life easier for ministries.

Let us begin with the fact that ministries in one way or another are being consolidated. Here their size is being reduced and their functions are changing. They cannot but change, inasmuch as direct ties among enterprises are being developed and the market is becoming stronger—this process is taking place extremely painfully, but it is inevitable. But this being the case, ministries are faced with a dilemma: either they will lose control over the situation in the sector, inasmuch as they have thousands of enterprises, or they will agree to the aggregation of enterprises into such complexes, which will make it possible to decrease the number of management units. Including outside the ministries! The main thing, which we tried to attain from the very start, is that within this complex every enterprise taken separately would not lose its independence: either de jure or de facto.

**POISK:** You succeeded in this. One of the enterprises belonging to Tekhnokhim changed over to leasing; others concluded tens of contracts within the concerns and with the outside world, bypassing ministries....

**B.V. Gidashev:** These are also horizontal relations! And a second, just a serious dilemma faced planning organs. It is no secret that the sectorial system of planning through ministries has compromised itself considerably. And in the immediate future it will probably be changed radically. Planning organs need to seek new opportunities, and it will be easier for them, undoubtedly, to interact with concerns which have turnovers in the billions of rubles.

Finally, the bureau of the Council of Ministers for the wood chemical and machine building complex will be able to regulate more efficiently the relations of inter-branch state associations with ministries and to keep track of the formulation of no longer sectorial, but precisely state programs.

Now if we tally the preliminary results of the activity of the concerns, the first—and encouraging—result is the fact that the group of enterprises, which left ministries, showed during the year the highest indicators as compared with any enterprise that remained in the former structure. We proved that we are entirely capable of doing without ministries—and this is with a minimum (11-man) management staff of the concern. You will agree, to start with this is rather good.

**POISK:** I would also like to evaluate the quality of the changes. For example, what qualities is science, which has been freed from departmental dictation, acquiring? The example of the young scientists of the State Institute of Applied Chemistry, who addressed to the board of directors the request to farm out to them promising themes (a kind of scientific leasing!), suggests the idea that first of all this increased independence is desirable for any self-respecting scientist and scientific collective.

**B.V. Gidashev:** You are correct, structural changes are for us not an end in themselves, but merely a means to achieve the maximum production efficiency. And here one of the obstacles is the departmental division itself of science, which does not make it possible to combine efforts for the solution of major, nonstandard problems. Try to solve them today if they had divided our chemistry all but into 12 types of science and 5 ministries!

That is why a number of large-scale scientific and technical programs without a single departmental barrier were developed in Tekhnokhim. For example, petroleum refiners now will not be confined to the output of primary products, as was the case yesterday, but will continue their conversion to detergents. Or plastics. That is, three or four ministries will begin to move over the "territory." Another example: the Fosforit Enterprise, which is narrowly specialized in the production of mineral fertilizers, with the help of partners in the concern will design and build a works for materials for electronics.

The competition among Tekhnokhim, Energomash, and the enterprises, which remained under the jurisdiction of ministries, has already become a reality—for state orders, for finances, for a sales market. And this is

splendid, it was worth making a fuss just for the sake of this. Our economy is very short on competition and rivalry. But the concerns have another important mission—the filling of the gaps which inevitably appear when such large organizations as ministries “steer” the economy. For example, the same Fosforit belonged to the Ministry of Mineral Fertilizer Production. And the ministry was by no means worried that an enormous quantity of most valuable fluoride raw material disappears during the production of fertilizers. The filling of such interbranch niches is also a function of the state association and will save it for certain from “unemployment.”

This is advantageous for scientists, the enterprise, and the country. It is very important that this practice is based on world experience of diversification (the investment of assets in various scientific directions). In the West there are hardly any firms that are not diversified, they deal with literally everything, from the construction of hotels to the launching of rockets, and that is why they are unsinkable. Diversification on the broadest scale is what creates stability for the enterprise. Tekhnokhim was also established on these principles.

**POISK:** Hence, the possibility of financing science in its own interests, which is very unusually for sectorial science, is being proposed. At the State Institute of Applied Chemistry they told me about the risk fund, from which the financing of enterprising developments, which are not connected with specific orders, comes. Then in 2-3 years, having come to a plant, scientists will be able to offer production workers technologies, about which the latter have not dreamt. How are such funds formed, from what sources?

**B.V. Gidaspov:** I will explain. The combining of the efforts of enterprises and the suspension of payments to the centralized funds of ministries enabled us at our own commercial bank (its establishment was also the first experience for the country) to form considerable accumulations, which are spent through several channels.

The first channel is the one you mentioned, this is the financing of risky programs with a result that is not guaranteed. This second is the assets that are used for the development of enterprises (in one place we decide to build an additional shop, in another place a pilot works). Social programs are financed through the third one. We are constructing a house-building combine, are designing another one....

**POISK:** I heard about this at the Plastpolimer Association, moreover, with curious details. The association turned over 800,000 rubles to the Leningrad City Soviet Executive Committee for housing construction, but thus far they have not been assimilated. Another matter is its own house-building combine, which has been furnished with foreign equipment. Apparently, cooperation within a concern is also advantageous for this; not all enterprises has currency, but if it is pooled....

**B.V. Gidaspov:** We are not ruling out the assistance of foreign firms in housing construction. But for the present it is not clear what the situation will be with currency in the country over the next few years. It will probably be difficult. Therefore, we also provided for other versions. And here the emphasis is on diversification.

**POISK:** You spoke about how the concern is violating the boundaries of ministerial spheres of influence, which seemed secure, and is entering into competitive battles with monopoly producers. But how democratically is science developing in the concern itself, has a mechanism, which stimulates “internal” rivalry and competitive, been found?

**B.V. Gidaspov:** I confess, such a special mechanism does not yet exist. But it can be incorporated and, so it seems to me, quite easily. It is sufficient to finance several collectives, which are concerned with the same problem, and then to select the best solution.

I was never afraid of what they call parallelism and duplication in science. One should fear duplication when performing planning and surveying work and especially when building facilities of industry. It is well known that in the area of chemistry and chemical technology scientific development proper requires 3-5 percent of the total expenditures on the setting up of final production and the output of products, 5-7 percent are used for pilot operations, 1-2 percent are used for designing. Hence it is clear that the competition of scientific developments is entirely justified, it is more costly for oneself to economize on this stage.

If we look at how the scientist at the concern feels (and at Tekhnokhim 40 percent of the staff are representatives of the sphere of science and scientific service), it will turn out that the atmosphere is creative, it is easy for him to breathe. For his interests, as a rule, do not fit in the sectorial framework. They are much broader. And whereas previously he had to camp on the doorsteps of administrations of science and technology and be a petitioner at ministries, at the concern he finds everything necessary—the possibilities of the financing of his own programs, a pilot base for the conducting of tests, and a base for introduction. Moreover, we are closely interacting with the Academy of Sciences and higher educational institutions. Therefore, from the “parochial view” of the researcher such a form of the integration of industry and science looks very attractive. At the same time the opportunity is appearing here to aim science at the solution of the most important problems. For example, environmental protection.

I do not know whether I will succeed, but I hope to retain the management of ecological programs, having taken Leningrad themes as the basis. Leningrad on this level is a splendid, although very complex and extremely neglected model. But if we find the correct approaches, they will be suitable for the entire country. And in Tekhnokhim and Energomash I see my support. Because the concern is not only basic research, but also design

development and the making of equipment for local purification systems at industrial enterprises of Leningrad and the oblast. Our ecological engineering center will operate on the broadest spectrum: from the generation of ideas to the complete elimination of waste products. For Leningrad this is of enormous social and political importance. While the possibility of the harmonious combination of scientific and political work inspires me.

**POISK:** Thus, the concern strengthens relations horizontally. You, Boris Veniaminovich, took a vertical step, of which, of course, your associates at the enterprises of the interbranch state association are glad. They are confident that in this position you will support them, although you will not be an intercessor at instances and a go-getter. They are counting first of all on ideological support. But you will consider in what party influence in science, the economy...should consist. What do you yourself think—ought concerns be planted like corn?

**B.V. Gidashev:** If you talk about corn, I am only for the square-cluster method, moreover, on limited areas. If you talk about concerns, today it is necessary to have more than 10-15 of them in the country. And even though, I know, about 400 proposals in this regard are in the Council of Ministers, it is necessary to take a very sober view of them, without moving too fast. At least another year will be needed to polish the standardized documents, to interpret the gained experience, to eliminate everything that has not justified itself, and not to lose anything valuable. To develop many systems and, of course, first of all a system of the interaction of the interbranch state association with the real economic mechanism. In particular, it is necessary to organize the material and technical supply of the concern and to establish a cost accounting subdivision, which will deal with the supply of the interbranch state association with respect to the entire product range, that is, will represent the interests of concerns in the State Committee for Material and Technical Supply. It is necessary that central economic organs would also participate more actively in the strengthening and study of the new structural unit, which the interbranch state association is. This is not only a Leningrad experiment—it is an all-union one. I intend in precisely this way to pose the question "vertically."

Now let us move on. What can a party worker do for the formation of some idea, concept, scientific direction? Let us face it, we are constantly faced with the resistance of the apparatus, which is loyal to the old methods. I have in mind both the management apparatus and the ossified part of the party apparatus. At the stage of the formation of new economic structures the stand of the active party worker can become decisive. I know that Tekhnokhim simply would have failed, had it not been for the support of the party Central Committee and the Leningrad Oblast Party Committee. How many times they gathered at this table in the office of the first secretary of the obkom. But for party support, we would not have broken through this wall of indifference. You would not call it

even a wall—it is a pillow. If you hit it with all your might, your arm goes in up to your elbow. You pull out your fist, and the form is restored. And everyone says: "yes," "yes," "yes." And everyone is "for." No one is opposed, but...nothing happens.

Only one thing remains: to mobilize the party forces of the enterprises and organizations, which are a part of the concern, to help them to realize their potentials, to concentrate this here collective thought, and to advance it as far as is necessary for the accomplishment of the task. In this I see the role of the party committee and my own role as first secretary.

**POISK:** It is noteworthy when the party leader and the scientific collective are allies. But, alas, how many cases there still are of administration by mere decree in science, and often party administration by mere decree. You have yourself probably also been faced with this....

**B.V. Gidashev:** My example is hardly indicative. The job itself demanded independence from me. I will say frankly: party organs never particularly hindered me. They helped far more often.

But not for everyone does it turn out that successfully, this is a fact.... I will note that if relations of the scientific collective and the party organ do not take shape, we are inclined to blame the party committee: of course, it is allowing administration by mere decree. But you will not get far in science with a directive. But this is just one side of the coin. There is another one. Organizations, which operate unstably, pursue immediate successes, but then for 7-10 years do not yield a return, very quickly lose prestige in party organs. They send commissions to such a institute and rake the associates over the coals. People are harassed. They begin to feel nervous and to write complaints to the party apparatus. Quite right, they nagged them to death. Are they, perhaps, to blame only for this?

**POISK:** Nevertheless, Leningrad scientists and party personnel have fine examples of collective creativity to their credit. It is possible to group with them the conducting of economic experiments, such as the "designer-process engineer," which became a step toward the changeover of scientific institutions to cost accounting. The establishment of interbranch state associations, no doubt, is also on the same level. These achievements could lend a unique nature and dynamics to the Leningrad model of regional cost accounting. But so far a decision on cost accounting of the Baltic region is being made. They are already talking about cost accounting in the Kuzbass and other regions of the country. And there is very little information on Leningrad cost accounting. What is this, a fundamental position or a consequence of the real state of affairs—the lack of a concept of the economic and social development of the region?

**B.V. Gidashev:** All the materials on Leningrad cost accounting are on my desk. Why do we not publish them? We want to weigh everything once more. We do not want to make a mistake. Take special note: the

concept of cost accounting is not a manifesto and not a diagram, but a complex multilevel program. I am following carefully the debates in the Supreme Soviet and the statements in the press and should point out: many deputies, even leading economists, look at cost accounting in a narrow, utilitarian way, only from an economic point of view. The concept of the Baltic republics, in my opinion, also suffers from this. God forbid that I am correct....

The point is that cost accounting to a certain extent is contributing to the development of the economy and is awakening initiative and enterprise. And in the end it is stimulating the increase of the mass of commodities. But at the same time it is leading to the serious stratification of society. Do you agree? Quite recently the concept "group egoism" was absent in our country. Now it has appeared, just as "plant egoism" has appeared. It can be plainly stated: republic and national egoism are appearing. And this is not conducive to integration. But integration processes are under way throughout the world! The Parliament of Europe, multinational corporations as the dominant form of the management of the economy. State boundaries have been swept away! Customs barriers are being lifted!

I understand that we cannot now use this experience completely, but are we not showing too much zeal in the building of barriers? Do you know what this reminds me of on the purely psychological level? The line on payday. No one looks at how much they have credited to him—they look at how much they have credited to their neighbor. It does not worry anyone how much he will receive himself—it is important that his neighbor would receive less.

I want to be correctly understood. Authoritative scientists worked on the Baltic model, a large reserve of studies was created. And still one must not underestimate the danger of the stratification, the division of society and of tension due to this. It is necessary to be ready for it. And once again without the party organization and without public organizations we will not cope with this trend. While it, I repeat, can have very unfavorable social consequences.

Here it is appropriate to speak about scientific forecasting. I am a practical worker, not a theorist. And I believe that there is no need to describe every step in detail before you take a step. But clear guidelines are necessary. And they often do not exist, the social sciences are before are among the debtors. Even the statements of "concrete" economists in recent times have been of some indefinite, apologetic nature. Life, they say, is developing rapidly, new elements of uncertainty are being introduced, therefore, we cannot forecast anything.

And still we will be objective: the unprecedented progress of technology and the economy and the social upheaval in our country have put the social sciences in a very difficult position. Whereas previously they called us

a country "with an unpredictable past," now, I believe, it is also possible to speak about a future that is hard to predict. Therefore, it is necessary to follow situations very precisely and to make adjustments in our models.

**POISK:** Indeed, you have headed the Leningrad Party Organization during a difficult, critical time. I noticed that the predominant motif of the responses to your election is sympathy. They sympathize with Gidashev—a scientist, organizer of production, politician....

**B.V. Gidashev:** But they have no sympathy for me. They simply envy me! No, seriously. I had conversations with sympathetic comrades. I say: "You must engage immediately in economic and party work." "But what will we do there?" I reply: "It does not matter what you will do there, the fact that it will make fighters out of you, is 100-percent certain!"

### INVESTMENT, PRICES, BUDGET, FINANCE

#### Pavlov Reaffirms 1990 Budget, Ability To Cut Deficit

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[Interview with V.S. Pavlov, USSR minister of Finance, by N.S. Yakovchuk, EKONOMICHESKAYA GAZETA correspondent: "Why Have We Gone Into a Financial Spin? How Will We Get Out of It?"]

[Text]

[Yakovchuk] Valentin Sergeyevich, a year ago, during the approval of the State budget, we heard for the first time that our country's expenditures considerably exceed its income. At first the deficit figure named was 36 billion rubles. Later it turned out that the deficit was actually 120 billion. Our readers are very interested in the question of how it turned out that we have so noticeably slipped over a financial precipice, since it was formerly thought that the State would make ends meet in some way. What happened?

[Pavlov] Yes, the USSR Supreme Soviet approved the budget for this year with a deficit of 120.8 billion rubles—a "net" deficit, without even provision with credit resources. They simply could not find any sources and they left it open. That is the sum and it was confirmed as a deficit. Drawing in the loan fund to cover the general State expenditures, over 60 million rubles at that, was somehow not even considered until now as a deficit. Although in everyday life, let us say, when a person does not have 25 rubles to go until payday and he has borrowed from his neighbor, he understands that he did not have enough after all. Well, here—since there is somewhere to get it, that means that it is like normal business.

In general, I should tell you that a budget without a deficit by no means signifies that the economy is healthy. You must know what processes are taking place within.

[Yakovchuk] All the same, just what was the reason for such a thorough breakdown?

[Pavlov] In the last two years, I would say, a classic transition from quantity to quality has taken place. These processes did not come into being today or yesterday, they have been slowly gathering strength and have gradually encompassed an ever greater sphere. When did the first signs of the budget deficit appear? At the beginning of the 1970's.

I remind you: this was a time of bifurcation—using "good heroes," who gave the people fine promises, and "bad executors," who seemingly could not carry out the correct aims. This policy was expressed in the economy: it was considered correct to promise the people more and more blessings, and at the same time we were gradually going farther and farther away from the real creation of a material base and the prerequisites for fulfilling what was promised.

Since 1970 we have not fulfilled a single five-year plan from the standpoint of producing national income. From the standpoint of consumption, however, we have mainly overfulfilled. Here the violation of the basic condition occurred: live according to our resources. While so far we have been accumulating national wealth, somewhere at the beginning of the 1970's we were already beginning, pardon me, to "eat it up." More and more funds were frozen in "unfinished projects," above-norm reserves and nonproductive losses of various types, and they began to be used for current consumption processes.

[Yakovchuk] Just what, specifically, were we "eating up."

[Pavlov] There is a popular explanation that we in general "ate up" our gold reserve. I remind you, however: in the middle of the 1970's we began widespread export of petroleum. In general, I should say, when we organized large-scale development of the Siberian petroleum deposits and their export—this was one of the episodes in our economic system for which, with respect to its high degree of organization and work results, it would be hard even to pick an analog. It could perhaps be compared with the history of creating nuclear armament. At that point we were able to mobilize our funds and resources and concentrate our efforts so much that within some five years petroleum extraction doubled. The prices on the world market at this point went sharply upward, and in a short time they rose almost ten-fold. We provided a tremendous flow of oil dollars into the country. At that time economists calculated that this flow of oil dollars made it possible, as a minimum, to double the increase in the national income in the 1980's.

[Yakovchuk] On the other hand, foreign specialists in Soviet economics ask us: how, with these prolonged

favorable market conditions and the tremendous export of petroleum, did you manage to stay poor?

[Pavlov] They ask the right question. We also "ate up" this golden rain of oil dollars. After all, what really happened? Instead of expanding and renewing our potential, and making a dash for a production base, that is, ensuring higher labor efficiency, and on this basis raising the living standards for the people, we simply began to live on what nature gave us. We sold and wasted these natural riches.

[Yakovchuk] Was it somewhat imperceptibly, Valentin Sergeyevich, that this "eating up" greatly raised the standard of living for the people, as it did in other countries exporting petroleum?

[Pavlov] Unfortunately, this is precisely so. You yourself will remember, however, that the arms race foisted on us is by no means a process that is free of charge. It would be naive to think that, let us say, the basis of the United States budget deficit is its tremendous military expenditures, but in our country this seemingly does not exist. We always said that 17-18 billion rubles was the entire outlay for defense. After all, though, it is clear that military parity can be sustained only with identical efforts. For the one whose economic system is objectively weaker on the whole, the strain of this effort is always much greater than for a country with a more powerful production potential at its disposal.

[Yakovchuk] In other words, you connect the process of slipping into a financial crisis mainly with defense and export?

[Pavlov] Not only that. It is tangible—you have produced and formed the woes of armament. You have pumped out oil and given it away. You have chopped down forests and exported them. You have extracted gold and sold it. The invisible process of using the accumulated wealth has taken place. This is the aging process of our production. Somewhere towards 1982 in our country the wear and tear on fixed capital in metallurgy approached 60 percent! This situation was characteristic of a great many sectors. It still has not been put right today. Right now, when we are reorienting the economic system toward the needs of the person, we often swear at our light and food industries. If we analyze the state of production funds in these sectors, however, where people really work with a conscience, we will see that there, generally speaking, half of the production funds must be created anew. There, much of the equipment, if not prerevolutionary, is at least 30 years old. To say that product quality can be ensured on today's level, by using productive capital which is three-four-fold worn out, can hardly be taken seriously.

This is a second very important point, which has made it possible for a long time "to keep from seeing" the budget deficit. After all, when the material reserves that were created and paid for by preceding generations of workers are "being eaten up," we obtain income in seemingly

pure form. Current incomes are balanced with expenditures, even though in actuality you are not living according to your means.

An end comes to everything, however. The Western world has completed its large-scale transition to resource-conserving technology, and we have found ourselves facing the fact: not only have we exhausted our natural resources and reserves, but the price for them has sharply risen. This has even more exacerbated our problems. Just recently, we received a ton of grain for a ton of oil, and then last year practically two tons of oil had to be given for a ton of grain. Besides, it must be remembered that every ton of oil and gas extracted costs us more and more.

[Yakovchuk] Some of the authors of the letters to the editor relate the State's financial difficulties to the economic perestroika that has begun. Your arguments indicate that this is not so.

[Pavlov] It is absolutely not so. We speak politely about stagnation, and the stagnant phenomena abroad in the 1980's. In reality, this was a completely precise manifestation of the crisis in our economy. Things must be looked at with open eyes. Therefore, when, after the April Plenum, we began to talk about perestroika, and about the need for a change in principle in the administrative system—this is not because this was someone's subjective wish. They say, "a different leadership has come, and a new model has been put forward." Nothing of the sort. The new leadership, soberly evaluating the situation that has formed, has openly said that there is nowhere farther to go along the old path. To go farther will be a complete downfall. Very little remains before the downfall. After all, at the close of the 1980's, we have neither enough oil, nor forests, nor gold nor anything. We will then be forced to close up the holes in the budget by directly raising retail prices. Remember: for gasoline, for gold. Why? Indeed, in order to reduce our internal consumption of them and sell them. Many people have written, that this, they say, would be a mistake, that prices have risen and sales have fallen and nothing like an income has been received. In reality, the goals here were of a different nature—not monetary income as such, it was simply that bread had to be bought. The internal consumption of some resources will have to be reduced in order to sustain the country's vital needs.

[Yakovchuk] In your report on the draft of the budget for 1990 at the session of the USSR Supreme Soviet you said that next year it was planned to cut the deficit in half. This is a very optimistic prediction, but how well is it substantiated? Has anything really changed in principle in the very approach to planning the budget?

[Pavlov] That is exactly the point, that this time the budget has been based on real, not mythical sources. It was always felt important to compile the material and physical proportions of the plan, and after that to "miscalculate" them. You remember that at the sessions of the USSR Supreme Soviet the ministers of Finance

always reported that the USSR State budget fully provided monetary resources for all the planned assignments to develop the national economy. These were not just words—this was the initial aim, for which the specific organization of finances in the country stood. The "iron" rule was put into effect: everything specified in the plan, they give you. Everything you have above that, not specified by the plan, they take away from you.

This year, in preparing the plan and the budget for 1990, for the first time, we "proceeded from the end": we went from the final financial results, precisely miscalculated, according to the sources, to the material and physical proportions.

[Yakovchuk] Many readers ask how much a source such as converting defense production, for example, will ease the country's financial difficulties.

[Pavlov] It is naive to expect that the perestroika of military production to civilian purposes will give an immediate, direct effect. It is impossible for a tank plant to begin producing tractors immediately. A tank engine is not a tractor engine. It is inefficient to use it, let us say, for plowing: we will be wasting the same fuel. A gain of no more than 1.7 billion rubles can be obtained straight off from the resources of converting—the allowance of the cut-back section of the army and the fuel conservation.

The yield from conversion will begin sometime after 1990 and will proceed in accordance with the accumulation. For the time being, however, we must invest in order to complete the transition of military industry to civilian rails. I can tell you that it was necessary to invest over 3.5 billion additional rubles immediately, in order to make new equipment and new dies and to prepare new blueprints and technical documentation. This is not just a kitchen faucet: they closed down the cold and started up the hot....

[Yakovchuk] Just what will be the main measures on the path to making finances and monetary circulation healthier next year?

[Pavlov] In the first place, we are continuing from what we started. We started with cutting back non-priority expenditures, above all, for defense purposes. This has become possible today by leaning on the success of our foreign policy. We will maintain our defense capacity at the proper height, but now at a lower level of confrontation.

Second. We have taken the line of cutting back State capital investments financed through budget resources—primarily for projects of dubious effectiveness or with a long recovery period. While the country is in such a serious condition, we feel that we are not in the mood for prestigious building projects, the effectiveness of which will appear sometime after the year 2000.

The third direction is to reorient all the economic units and regional organs toward the utmost increase in consumer goods production, filling the consumer market and accelerating the development of the service sphere.

The fourth direction is maximum mobilization of what has today become deadened in our country's national economy—various types of reserves, "work in progress" and uncleared charges.

Finally, the fifth direction—sharp activation of incentives to reduce costs and increase profits.

These are the directions forming the basis of the struggle to reduce the budget deficit in 1990 to 60 billion rubles. We came to the session of the Supreme Soviet with this. Moreover, when I speak of 60 billion rubles, this is without bringing in bank assets. We are not going to draw any bank loan fund assets into the settlement at this time.

For the first time, the increase in expenditures in the country will be less than the increase in income. It is precisely in this turning point, and not in manipulating figures that the essence of the principle of real financial health lies.

You know, it is extremely important to hold our ground, and not to overstep the 60 billion. If the Supreme Soviet decides that the Ministry of Finance does not have the right to finance any expenditures, by going beyond the limits of the revenues obtained and the budget calculations, this will be a step toward reestablishing a sound ruble. After all, today it is far more important not to raise wages, but to begin fully supplying goods for the ruble that the people earn.

[Yakovchuk] After all, though, these directions have essentially been maintained in the program of extreme measures for financial health, which began to be implemented at the beginning of this year. How successful have these measures actually been in correcting matters in the budget?

[Pavlov] What should I say. We counted on the effect from them being approximately 30 billion, but we actually obtained about 22. On the whole, however, I am counting on the fact that we will finish the year with a deficit no longer of 120, but of not over 92-95 billion rubles. At the same time, on the whole, probably, it will be 92, and not, according to the union budget—somewhere around 95, because the union republics will come out with an excess of income over expenditures in the order of 3 billion rubles. Nonetheless, I must honestly acknowledge that a substantial proportion of this result of the work of the union republics will be concerned with utilizing the residual funds accumulated by them earlier for local and republic budgets.

[Yakovchuk] Tell me, has the age-old budget deficit also been, so to speak, "broken down" for union republics?

[Pavlov] When the Supreme Soviet approved this deficit, part of it—in the order of 11.2 billion rubles—was

for the first time related to the state budgets of the union republics. By the end of the year, however, the deficit will remain only in the union budget. I remind you that all large-scale expenditures such as eliminating the results of the Chernobyl accident, the earthquake in Armenia, the natural calamities in the Far East and in Central Asia, etc., are virtually financed out of the union budget.

The revenues come mainly to the republic budgets. For example, 3 billion more profit will be received this year than calculated, but the above-plan withholdings from it will be received in the republics, and the union budget, in this case, conversely, will underobtain 1.7-1.8 billion rubles.

[Yakovchuk] Some of our readers express doubt as to whether the reduction in capital investments in production projects will not lead to results contrary to what we expect. At the beginning of our conversation you indicated that the production capital is worn out and needs immediate and radical updating. Just how can production be developed without capital investments?

[Pavlov] This is true. The main thing today is to stand our ground and fight against inflationary tendencies. The further development of cost accounting and rise in interest in developing production will depend on whether or not we provide the enterprises and production collectives with real material-physical elements and services to the extent to which they have earned their monetary resources.

For the sake of this we will, beginning next year, proceed to something very new in principle, the results of which, I think we cannot yet completely estimate. The point is that we have specified in the budget for 1990 that all the monetary funds of the enterprises and the centralized funds of the ministries, designated for development and for social-cultural construction, be provided with the limits of State capital investments. That is, for the first time, we are not directing money where it was decided to allot capital investments, but are directing the capital investments where money has already actually been earned for these purposes. We will direct 112 billion rubles according to this procedure. Standing behind this is the substantial change in the structure of the production capital investments themselves, because, for the collectives of enterprises who have earned these funds, the main thing is not the construction of new plants, but the modernization and improvement of production. Well, perhaps, its expansion. That is, rebuilding and re-equipment of production will be of paramount importance—precisely what we have spoken about for so long, but have not done.

By this turn in principle we are simultaneously cutting back emission financing of the economy. By supplying goods for the money accumulated by the enterprises, we are cutting back State financing of new construction. Therefore, our country is now cutting back budgetary financing on a considerably larger scale than the general

reduction in the volumes of capital investments. This is even given the fact that the proportion of nonproductive construction, that is housing and social-cultural facilities, will substantially increase, the financing for which the budget still mainly retains for itself.

[Yakovchuk] The possibility of converting from budgetary financing of capital construction to extending credit has been discussed on the pages of EKONOMICHESKAYA GAZETA. What is your attitude toward this idea?

[Pavlov] We are introducing credit into production construction today as a source of financing. Today, however, we are no longer reanimating the old idea—of substituting credit for budgetary financing. No, we feel in general that production construction, with the exception of specific projects that are of decisive importance for the country's economy as a whole, should be implemented only through credit.

Some comrades pose the question in this way: we cannot get credit, and therefore we will not keep to the normative periods for construction, and this means that recovery within the established periods will not be ensured. Under these conditions the bank will not extend credit, and they say, the construction project must be financed from the State budget.

We are now answering this: if the bank feels that capital investments in this case are inefficient and it is inadvisable to extend credit, than it is all the more unsuitable to finance this object from the budget. Our country has no more "foolish" free money.

[Yakovchuk] Do you count on receiving the support of the Supreme Soviet for this approach?

[Pavlov] Yes, we would like to obtain support from the deputies, and not just in this matter. You know, in one more question we have occupied a position that is very unexpected for many people. We feel that it is time to pass from the words "struggle against unprofitability" to the action. We have specified that we will no longer make it possible for the ministries, departments and republics to finance unprofitable production facilities and fatten them through the good workers. We have specified that the ministries, departments and republics be given the task of mobilizing funds to finance capital investments through declaring the bankruptcy and selling the property of chronically unprofitable enterprises. Let them hire out their collectives, let them hand back to the enterprises—State or cooperative—those who can really set up loss-free production of goods needed for the consumers there. The country, in this complicated economic situation, cannot permit itself to support them any further.

In precisely the same way we have proceeded to practical assignments, stipulating in the budget mobilization of part of the resources from the unfinished construction projects, and turning them over to the enterprises and

cooperatives which can there, first of all, develop the output of goods needed by the people.

[Yakovchuk] No one will voluntarily give up....

[Pavlov] Voluntarily—no. We say to the ministries, however: we will give you some of the funds, but only part of them and only on the condition that you will obtain the remaining funds for financing your expenditures from selling unused, frozen resources. Of course, ceasing the support of "long-term construction" will inevitably cause construction stoppage somewhere. It must, however, be determined with the fate of the expenditures for unfinished projects. It often happens that equipment is lying around in one place and there are no production areas. The other place has shops, whole bays or wings that are not used because there is no equipment. The new procedure, I hope, will help to correct this matter.

[Yakovchuk] Valentin Sergeyevich, the people are very worried about the fact that each ruble of wages that they receive contains increasingly less real commodity filling. Meanwhile, the State continues intensive increase of the output of paper money, not guaranteed by an adequate increase in goods and services.

[Pavlov] In reality, the process of increasing the budget deficit has gone parallel to the increase in issuing money. You know, it is just like the stone in the mountains: when it has broken loose, it will no longer bring an avalanche after it. Sometime, at the end of last year or the beginning of this one, the question was raised as to further movement along this path being unthinkable.

In general, it cannot be stated that monetary circulation without emission is in all cases better than emission circulation. Here it is important to bear in mind, however, that emission financing is like a spring. It can be stretched out only up to a certain point. While you stretch it, you are training your muscles, and your health is growing stronger. If, however, you stretch the spring beyond the critical boundary, it breaks on you and hurts both hands. This is the way emission financing of the economy looks today.

This is because, after all, the topic is really the fact that accumulation of unbacked money, both at enterprises and among the people, will ultimately combat the main object—the incentive to work. When the main task becomes that of backing up goods and obtaining, not earning, the mechanism, so to speak, of a progressive drop in labor productivity is turned on. The more money you issue, the less you begin to produce real material resources and public blessings.

In reality, the final brink is very near, and it has already touched each person in some way or another. The measures outlined should stop this threatening process. In the first half of 1989, the emission was 8.9 billion rubles, and for the entire year following, according to predictions, it will not exceed 10 billion.

[Yakovchuk] The call was heard at the Congress of People's Deputies, I remember: our internal financial difficulties can be solved by increasing the foreign debt. Is it perhaps worth resorting to this?

[Pavlov] Yes, Deputy Shmelev said that the whole world lives in debt and is not about to pay it back. Well, in the first place, it must be said here, which world lives in debt and does not intend to pay it back. These are the poorly developed countries that do not intend to pay it back. After all, though, you must also remember the situation in which they find themselves. In the second place, you must also find those who want to, who would give you loans without being paid back. Where is this country that today feels like taking on the support of our 300 million? Not to mention the fact that when they give loans, they dictate the conditions for you. Only after you fulfill them will they give to you. So you do not ask for loans without paying them back, when you do not have a definite plan for what to do with the credit. Even when you come to a neighbor for money, she will ask: "When will you pay it back?"

Therefore, in my opinion, such "recipes" for financial health look somewhat strange to a serious economist.

[Yakovchuk] Valentin Sergeyevich, here is the last question. Can you say, with complete sincerity, that you yourself believe that our tremendous budgetary deficit can be cut in half in one year?

[Pavlov] I am certain that the budget that we have presented today to the Supreme Soviet can be fulfilled. We will have to break out in a proper sweat during the year, however. It is particularly important that the people become aware, as quickly as possible, of the fact that a real rise in the economy and their well-being depend not only on each collective, but literally on each person—his discipline, responsibility and attitude toward the national good.

If we just require an improvement in the matter from others, feeling that "my affair here is a little one," "I will wait at the side for a little while, until everything is formed by itself," the negative processes will remain difficult, the State's economic losses will grow and the people's standard of living will drop. As they say, you cannot force a person to be happy. We can reestablish the health of the economy only by putting together the active efforts of each one of us.

### Two-Tier Bank System Proposed

*18200464 Moscow EKONOMICHESKAYA GAZETA in Russian No 37 Sep 89 pp 14, 19*

[Article by N. Garetovskiy, Doctor of Economic Sciences: "Narrow Departmentalism in the Banking System? How Some Impede the Development of the New Money and Credit System"]

[Text] Two years have passed since the banking system has switched to new rules. These years have shown that

the banks' specialization has helped make their ties to the economy closer. Branches of the specialized banks have broader rights and can now make all decisions on making loans and getting them repaid. As a result, financial and credit factors have a greater impact on industry, and the structure of bank deposits has improved. Measures by the specialized banks to curb credit have slowed its growth, which for many years outpaced that of industrial production. The credit system has moved to prevent wasteful uses of credit: credit is no longer used to make up for losses and to accumulate supplies and materials above planned levels. No loans to make regular payments and to cover shortfalls in enterprises' working capital are now made. Issuance of money as a means of funding loans to industry has been stopped. Excess credit is being withdrawn from the business cash flow, to be replaced by enterprises' own funds. In two years, R48 billion of loans has been withdrawn from the system, including R25.8 billion in 1988 alone.

Nevertheless, many unsolved problems remain, which is why the credit system has not yet become a powerful tool of economic reform.

### Financial Markets and Monopoly

Money is an extremely important lever by which the banks influence the economy. The lack of a socialist market and its core, a financial market, has kept this lever from being used actively. Even now, there is practically no wholesale trade in the form that would allow a socialist market to function. The fact that an enterprise holds a certain sum of money is by no means a guarantee that it would subsequently be able to acquire necessary goods. Moreover, in the past two years the situation has worsened, since the process of money accumulation in the economy has accelerated compared to the previous five-year plan period. All this restricts the banks' influence on industry and money continues to play only a passive role in the economy as a means of accounting. As a rule, it follows the flow of goods rather than directing it.

In a large measure, the passive role of money is the result of the monopoly structure of our banking and finance system. The creation of the specialized banks, namely the USSR Industrial Construction Bank, the USSR Agricultural Industry Bank and the USSR Residential and Social Services Bank with their networks of local agencies, spun off from the USSR State Bank and the USSR Construction Bank, has led to a situation whereby the monopoly of the latter two has been replaced by that of the newly created banks. This centralized structure has divided the economy into spheres of influence of the specialized banks. In this system, every enterprise is attached to a branch of its specialized bank and can not choose another partner. In a sense, it is in bondage to its bank. The existing situation goes against the grain of new management ideas and the laws on the socialist enterprises and on cooperatives, which call for full economic independence of enterprises.

The role of the USSR State Bank is now limited to distributing resources at the top level among the specialized banks. The central bank has no influence over the fulfillment of the credit plan, since the USSR government approves a separate credit plan for each specialized banks.

The system is administratively overregulated. Enterprises can open accounts only at the credit institution assigned to them, whereas the banks could only deal with one type of enterprises.

As a consequence, in the past two years the activities of the USSR Industrial Construction Bank, the USSR Agricultural Industry Bank and the USSR Residential and Social Services Bank have been confined to carrying out a single function: to distribute resources vertically to their affiliates. In doing so, the banks often were not guided by so important a consideration as profitability of investment, and their activities were often limited to supplying financial resources and subsidies to enterprises. The introduction of the new credit system using accounts receivables as a collateral has allowed chronically ailing enterprises to conceal their financial weakness. The Industrial Construction Bank, for instance, has effectively distorted the idea of such credit: its credit infusions have kept enterprises from going bust.

The monopoly status of the specialized banks and centralized distribution of credit funds to them have prevented the introduction of trade in funds—i.e., the creation of financial markets—as called for by the CPSU Central Committee and USSR Council of Ministers resolution on restructuring in the banking system.

What I mean here, of course, is the early stage of the markets' development, not their classical form. The latter is a later, but already increasingly necessary stage in the development of the money economy in our country.

Moreover, the specialized banks have used their monopoly power to introduce various artificial levies on enterprises and consumers, charging them for routine banking operations and not for new services.

For instance, the Klin branch of the Industrial Construction Bank decided to charge its customers 2 percent of every cash deposit. In Moscow, meanwhile, agencies of the Residential and Social Services Bank illegally charged customers for exchanging old banknotes 20 percent of their value. The practice reached such proportions that it triggered numerous legitimate complaints, including some in the press.

Faced with bureaucratic recalcitrance of the banks, enterprises began to look for solutions, given that they now had considerable freedoms themselves, which was especially true in the case of cooperative enterprises. The solution that emerged was to create commercial and cooperative banks based on a shareholding principle. Over 150 such banks have registered their charters thus far.

### New Competitors

Commercial banks are being set up in many areas to assist scientific and technological progress and technical retooling of enterprises, to raise the output of consumer goods and services, to implement social and consumer services programs and for other purposes. These banks, due to the democratic way in which they operate and to their specialization, are a step or two ahead of the specialized banks.

The system of all-purpose commercial banks has injected an element of competition into the banking business. Now enterprises have the right to choose their bank, whereas the latter should be able to select their customers based on how efficiently their funds are used, and not on administrative writ. Many enterprises began reaching out to commercial banks. Yet, they encountered obstacles.

The specialized banks are putting direct pressure on their customers to hold them within their spheres of influence. Many examples can be cited to illustrate violations of this legal right of enterprises.

At the end of June, the Bashkir agency of the Residential and Social Services Bank complained to the USSR Industrial Construction Bank and asked it to "stop acts of piracy" by the republic's Industrial Construction Bank agency. The local office of the Residential and Social Services Bank is housed at the Kalinin branch of the Industrial Construction Bank. The local Industrial Construction Bank has been pressuring the Residential Bank's customers to sign form letters asking to be transferred to the Industrial Construction Bank and has even devised a set of illegal procedures to transfer customers without the signature of the Residential and Social Services Bank representative.

The director and the chief accountant of the Yegoryev Refrigeration Complex complained to the Residential and Social Services Bank that the manager of the local Residential and Social Services Bank V.Lashkovoy was preventing the complex from taking its business to the USSR Agricultural Industry Bank. Starting in January 1989, the Residential and Social Services Bank branch was trying to force the enterprise to sign a contract for the bank to provide routine banking services for pay. Only thanks to the steadfastness and persistence of the director and the chief accountant, the enterprise avoided this bondage, as they called it. Inspections have shown that no partnership had been established between the Yegoryev Refrigeration Complex and the Residential and Social Services Bank, contrary to what the USSR Residential and Social Services Bank's managers repeatedly claim in their speeches.

Tensions have arisen between the specialized banks and the newly created commercial and cooperative banks. Seeing them as direct competitors, the specialized banks have already begun putting obstacles in their way.

Here, for instance, is what A. Kasumov, chief manager of the AzSSR division of the USSR Residential and Social Services Bank, did to his fledgling competitors. Apparently he decided to strike at them while they were still in infancy.

A. Kasumov announced to the president of the commercial bank "Universal" E. Aliyev, to the president of the Baku cooperative bank A. Azimov and the president of Dekabank Z. Gadzhiev that the retail branch of the Residential and Social Services Bank would no longer be able to provide services to them and asked them to go elsewhere to obtain service starting 1 July.

A. Kasumov knew full well that this request would effectively mean the banks' liquidation: no other bank, thanks to their jealously guarded compartmentalization, would agree to service them. There was no alternative.

Such are the conditions in which commercial and cooperative banks begin their existence. What is surprising is that the managements of the USSR Industrial Construction Bank and the USSR Residential and Social Services Bank have remained silent, and even showed tolerance when faced with such occurrences at the local level.

The specialized banks are trying to replace commercial and cooperative banks with surrogates. For instance, they propose to create industry development funds to which enterprises would contribute and in which the USSR Industrial Construction Bank would take a share of up to 30 percent of statutory capital. Some enterprises, under pressure from their ministries, have joined such funds without first sorting things out. In reality, the funds turned out to be little more than branches of the Industrial Construction Bank. It is another form of the same old monopoly.

An important role in setting up new banks belongs to the republics' Councils of Ministers and local soviet ispolkoms who must regulate and support this process. This is especially important as regions shift to economic accountability, since the issue which banks could operate in a given region will be decided locally.

As though to counter commercial and cooperative banks, the USSR Industrial Construction Bank, the USSR Agricultural Industry Bank and the USSR Residential and Social Services Bank have embarked on an accelerated campaign to open local branches. Instead of abolishing representative offices and thus make credit services to clients easier, they set up costly agencies with additional staffs of credit officers, making the system of payments even more complex. All this is done hastily, without any economic rhyme or reason, often against the wishes of local soviet ispolkoms and sometimes by cajoling the latter to submit such requests.

Secretary of the CPSU Komi obkom Yu. Spiridonov and chairman of the republic's Council of Ministers V. Khudyayev could no longer tolerate this banking "orgy at the state's expense" and felt compelled last August to

write to Moscow, to the specialized banks' managements, asking them to stop such actions.

V. Krylov, deputy chairman of the Moscow Oblast soviet of people's deputies, wrote to the USSR State Bank complaining that the specialized banks, after the USSR Council of Ministers issued permission to set up new banks, began costly efforts to broaden their own networks on the oblast's territory. He wrote that in many cases such decisions were not justified economically and did not improve the quality of services. They entailed additional expenses on staffs and additional space to be allocated to them; they tied up technical and communications services and required additional resources to guard future branches. Only between 1 April and 8 August 1989 144 new branches of the specialized banks were opened, including 75 branches of the USSR Residential and Social Services Bank, 40 branches of the USSR Industrial Construction Bank and 29 branches of the USSR Agricultural Industry Bank. This process is accelerating further. Inspections have shown that new branches are often set up in the same building. The international practice has not yet known such achievements.

While setting up a commercial or a cooperative bank requires a collective's own funds which it earns, the growth of the specialized banks' network is achieved at the expense of the state. This is the reason for all the haste in opening additional branches by the specialized banks. The expenditures which the banks incur now to support them would be taken into account in their basic budgets defining their future relationship with the state. The question arises why the USSR Gosplan and the USSR Ministry of Finance have kept out of this process. They would have to approve the appropriate normative figures.

Spending to support the banking system increases also as a result of the growth in the number of employees.

In 1986, the banking system employed 406,300 workers. Expenditures on this staff amounted to R973.1 million, of which R700.5 million was spent on wages. In 1987-88, the number of employees in the USSR banking system rose by more than 18,000, and the cost of supporting the staff increased R129 million, with wages up R125 million. The question arises whether the managements of the specialized banks have used their independence from the USSR State Bank properly. Probably not.

#### And What Will Happen Tomorrow?

The existing banking system should in our opinion consist of two tiers. The USSR State Bank should act as a central bank, retaining the exclusive right to issue money, balance the trade account and regulate the exchange rate of the ruble and the entire system of cash payments and transfers.

As to other state banks, such as the Industrial Construction Bank, the Agricultural Industry Bank and the Residential and Social Services Bank, they should become

commercial banks in the new system and be owned by shareholders. The experience of the past two years has consistently shown that the functions of the Residential and Social Services Bank should be transferred to the Savings Bank.

Since they are owned by the state, these banks currently care little about developing economic resources. Their main concern is to get as much money as possible out of the State Bank. For instance, the Agricultural Industry Bank has in essence become the industry bank of the former Agroprom; on dozens of occasions, the management of the latter joined forces with the management of the bank to appeal to the State Bank for credits to support various projects.

Or take for instance the Residential and Social Services Bank. In the cooperative sector, its loan arrears were as much as R46 million at the start of this year—even though cooperatives generally reap large profits and there is a shortage of funds for residential construction.

Had these banks been owned by shareholders such as ministries and enterprises, they would have been more concerned with placing their funds more rationally. The problem of getting timely repayments on their loans would have been a central one.

More than half of Industrial Construction Bank's large clients have already left it for commercial banks, taking with them their share of capital. This trend will accelerate due to the above-mentioned advantages of commercial banks.

The specialized banks have been unable to develop any special policies related to their industry-specific orientation. The problem is not only the fact that their staffs no longer have firm links to enterprises and economic entities, since those links have shifted to local branches. The staffs of the specialized banks have no incentive to use funds efficiently. This is the reason why they put constant pressure on the USSR State Bank to give them greater and greater lending funds.

For two years the specialized banks have failed in the extremely important task of implementing controls to make sure that capital investments are used efficiently. This remains a fundamental problem. Capital investment continues to be spread thinly among many projects. In 1989, newly started construction projects surpassed the number of projects begun in 1987 and totaled 4,300. The share of incomplete construction projects rose to 85 percent from 78 percent of the total annual construction volume and at the start of this year reached R164 billion. The backlog of non-installed equipment reached R14 billion and continues to climb.

Practically all negative trends evident in the activities of the former USSR Construction Bank prior to 1986 have been exacerbated in the activities of the USSR Industrial Construction Bank in the current five-year plan period.

The monopoly position of the specialized banks flies in the face of the need to create rational money circulation, the experience of the international financial markets and the need to regulate money supply. In a centralized system, local branches of the specialized banks lack self-financing independence from their superior entities. In this respect, it must be noted that even shifting units of the banks to complete economic accountability may not have the desired effect if lower-level entities remain dependent on their head offices.

Local branches of banks, be they cooperative banks, commercial banks owned by groups of companies or regional commercial banks, should become the second tier in the new two-tier bank system; they should be completely free to make all decisions. The only criterium in using their resources should be the merits of the project for which the loan is made and the profitability of the proposed long-term investment. These should be the main factors affecting the banks' decisions. The existing system, whereby the banks carry out mechanically administrative decisions to finance capital spending projects according to plans approved by central bodies, should be scrapped.

Naturally, the new two-tier system should be based on flexible interest rate policies. The ability to set differentiated rates on loans and deposits should be central in the banks' relationship with clients. Only under these conditions could the banking system become a mechanism for directing the country's economic and social development by financial means. It is also important that the USSR State Bank, in its capacity as the lender of the last resort, sell money to the banks at the same rate. To give preferences in one form or another and provide subsidies is the business of the USSR Ministry of Finance.

### Measures for Improving Financial Situation Outlined

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No 8, Aug 89 pp 3-12

[Article by V.K. Senchagov, USSR Deputy Finance Minister, doctor of economic sciences: "Economic Reform and the Problems of Financial Health"]

[Text] For several years now the USSR has been following the path of large-scale transformation of its economic system. In extent and innovation it can be likened only to the New Economic Policy that our country implemented during the 1920's. The panorama of transformations encompasses all of the most important elements of the economic mechanism—planning, price formation, financial-credit instruments, wholesale trade and foreign economic ties. The functional forms of production relations have been touched and fundamental features of these relations, their foundation, are changing.

We are speaking about the development of lease relations, cooperation, joint-stock management forms and

the development of joint enterprises. Relations of non-economic constraints are being replaced more and more by a system of economic stimuli creating internal incentives toward self-development in the labor collectives of enterprises as well as in the individual. All of these problems were actively discussed at the first congress of people's deputies.

If we compare the theoretical and practical arsenal of ideas and means for implementing them with which we began economic reform to those which have been accumulated in the process of implementation we will note a considerable deepening in our understanding of the very nature of reform as well as of the ways and means to carry it out.

Two years ago we had to deal with the question of where to start. In any reform this is the most important question. It was determined that we must begin with the enterprise. It is here that material values are created and that all production and social processes vital to the labor collective occur. It was necessary to remove enterprises from the clutches of a multi-tiered administrative pyramid and to clearly determine their legal status. The USSR Law on State Enterprises (Associations) was developed for this purpose. Principles of complete cost accounting, self-financing and self-management were made the basis for the activities of enterprises. In order to implement these principles in practice it was necessary to decisively change the planning system and to make a transition from directive assignments to government orders and a system of economic standards. The transition was implemented gradually, and since 1989 all enterprises within the material sphere of production have been working according to the new principles.

Naturally, a question arises about the initial results of economic reform. In providing an answer, we must keep in mind that reform has not yet been completed; it is in the process of development. We can even state that we understand better and better the need to strengthen basic relations—to give socialist property to the real and fully empowered manager and to build relations among various members of the economy as well as with the government and banks according to the laws of commodity-financial management with a single limitation—intolerance of exploitation.

The results of the stage of reform we have passed through are important in several ways. The most important thing is that enterprises have received independence in utilizing the resources they have earned. Their financial base has become considerably strengthened. The profits left to them have increased from 44 percent in 1985 to 51 percent in 1989. They now have about 250 billion rubles at their disposal. If we take the country's amortization fund, the most important source of financing reproduction of fixed capital, today over 90 percent of it remains at the disposal of enterprise whereas in 1985 the figure was 12 percent.

Even a traditionally centralized source for obtaining financial resources such as taxes from turnover is undergoing changes. Beginning this year up to 30 percent of the growth in taxes from turnover can be used to provide incentives for labor collectives to increase production of light industrial products as well as to create specialized capacities for the production of consumer goods at nonspecialized enterprises.

We can say that profits are becoming more and more of a moving force in the operations of the enterprise. In order to increase them enterprises are trying to let extra workers go and to increase labor productivity. Let me present just a few figures. Whereas in 1981-1985 the productivity of public labor increased an average of 3.1 percent annually, in 1986-1988 the figure was 3.8 percent and in 1988—5.1 percent. Profits during the last five-year plan increased by 6.1 percent on the average annually, and during the last 3 years—by 10.4 percent.

In 1988 there was a drop in the number of defaults on payments to banks and suppliers; the shortage of their own working capital was decreased by 2.5 billion rubles. In industry in 3 years of the five-year plan the number of unprofitable enterprises decreased by a factor of almost 1.5 and the size of losses decreases by almost threefold. The turnover of working capital accelerated. In 1988 there was a decrease in the level of reserves of physical commodities of 7.0 billion rubles as compared to the plan. The indicator of production profitability is improving noticeably. In general the rejuvenation of the enterprise's economic life is evident.

However, this rejuvenation includes not only a positive beginning but also a number of negative processes. The striving to achieve large profits under conditions of an undeveloped market, a shortage of many means of production and the monopolistic dictates of the producer result in increased profits due to increased prices which naturally cannot but have an effect on the development of inflationary processes.

Short-term interests still play a decisive role in the operations of enterprises as well as of cooperatives, to the detriment of long-term development goals. As before, innovation in production, the introduction of new technologies and the sparing of resources are being made a secondary priority.

The effectiveness of reform and especially of the new system of economic incentives is decreased considerably due to the deterioration of the financial situation in the government. For 1989 the confirmed budget has a deficit of 35 billion rubles. Additionally, in order to cover government expenditures, 63.4 billion rubles have been borrowed from the bank. In this way the total deficit comprises about 100 billion rubles.

In addition to the budget deficit the problem of monetary circulation has grown more acute. In 1988 the monetary income of the population increased by 38.5 billion rubles whereas growth in national income has

equalled 25 billion rubles and in retail commodity turnover—25 billion rubles as well. The volume of all forms of monetary assets belonging to the population, i.e. available money, deposits in savings accounts, insurance policies and so forth, significantly exceed reserves of commodity resources. The average annual production of money in this five-year plan surpasses indicators for the 11th Five-Year Plan by several times.

Some politicians and economists tie together the exacerbation of the country's financial position and its monetary circulation with the implementation of economic reform. An analysis shows that complex interwoven objective and subjective factors are exacerbating the financial situation. First of all, the sources for the budget deficit lie in the past, in those negative processes that developed in the economy in 1970-1985. During this period the budget was balanced but the self-balancing was unhealthy. We have in mind the forced increase in the extraction and sale abroad of petroleum, gas and other raw materials, the unprecedented growth in wine and vodka production, the direct and hidden increases in retail prices and borrowing assets from the bank.

In balancing a considerable role was played by the confiscation of assets from enterprises. Under conditions of a transition of the enterprise to complete cost accounting and self-financing normative relations are established between the budget and the enterprise and the government no longer can resort to the arbitrary confiscation of profits.

Due to the competitive world prices that are unfavorable for us the sale of energy products no longer provides the kind of income we received previously. Because of this factor in 4 years of the current five-year plan 30 billion rubles fewer were received than planned. More than several billion rubles were lost in connection with excesses in the anti-alcohol campaign. Over 8 billion rubles were required to eliminate the consequences of the accident in Chernobyl, and 12 billion rubles to eliminate the consequences of the earthquake in Armenia. Considerable expenditures are borne by the government in providing aid to Afghanistan.

We must also consider that the strengthening of the social orientation of economic development has required additional government expenditures of 21 billion rubles for the development of public health, public and higher schools, social aid to the poor and so forth.

Considering the complex financial condition of the country an opinion is being put forth that it is essential to slow the implementation of economic reform and even to halt it. It is difficult to agree with this. As has already been noted, the sources of financial difficulties lie to a great extent in the depths of the command-administrative system. If we even move toward increasing centralization of financial resources without changing form there is no guarantee of the achievement of a balanced budget.

At the same time, in establishing a plan for the continued development of economic reform we must of course deal with the exacerbation of the situation in the country and with monetary circulation. In 1989 the budget deficit is greater by a factor of 9 than in 1985.

At the present time a program of financial improvement for the national economy has been developed and a special resolution by the government has been passed on this question. The program includes a complex of measures to be implemented in 1989-1990. These are priority measures. The program also includes measures that will be implemented during the 13th Five-Year Plan.

It is very important to develop the proper approach to the elimination of the budget deficit. This deficit developed gradually and can hardly be eliminated in 2-3 years. We must also consider that measures to improve finances do not have to give rise to new difficulties in the development of the national economy and to new exacerbation of social tensions in society.

Purely theoretically it would be possible to achieve balance by means of raising retail prices. Today budget subsidies of 80 billion rubles are used to support the existing level of retail prices. About 32 billion rubles are allocated from the budget for differentiated supplements to procurement prices for kolkhozes and sovkhozes, which have great production expenses.

Based on the simplified understanding of the laws of market economics it would be possible to transfer all of these subsidies to the consumer and to eliminate the budget deficit, but we must consider the social consequences of this kind of decision. It would bring about cardinal changes in the living conditions of millions of people, would extremely exacerbate the social contradictions within the society, and most importantly, would not enable us to normalize the situation in the food market.

The economic structure is not yet ready to fully satisfy growing demand for long-term consumer products. For example, what is the point of economizing in consuming food products if it is not possible to utilize the savings to expand the consumption of long-term consumer products? The increase in prices as a means of supporting market balance is justified when the additional profits obtained in this way can be used to expand the production of goods that are in demand. Within our management system the economic mechanism for the special-purpose use of surplus profits has not yet been developed. This is attested to by the historical experience of increasing retail prices during the 1960's. We can confirm that it provided only short-term balance in demand and did not create long-term factors for expanding food production output.

Many economists understood well the inexpediency of an arithmetic balancing of the budget by means of the one-time increase in retail prices. Essentially, this path meant transferring financial difficulties from the shoulders of the government to those of the individual man.

This is why a resolution was proposed that this price reform should not be accompanied by a drop in the standard of living of the population. But the course of discussions on price reform showed that under conditions of commodity unavailability the majority of the population does not agree to increased retail prices even with certain government guarantees. I am speaking about compensation for increased retail prices in the form of special supplements to wages, pensions and grants.

The second way to balance government income and expenditures that is well-known to everyone is increasing taxation. Here there are also great limitations which must be considered. The fact is that we have proclaimed the principle of stability of management conditions. We have in mind the stability of economic norms established for enterprises. Increasing the norms for confiscating profits for the budget would return us to the former practice when the majority of supplementary income earned by an enterprise was directed into the government budget, thereby essentially weakening incentives to earn assets. This is why this path toward balance is not acceptable, at least not in the next year or two. There is no opportunity to decrease government expenditures by means of social and cultural measures. In 1989 163.5 billion rubles were allocated for the given purpose and this, considering the lags in the social sphere, is a minimal sum.

How can we balance the budget? Each year the government spends 80 billion rubles to implement centralized capital investments. A decision has been made to curtail them. This can be achieved firstly by means of curtailing ineffective building and secondly by means of the extensive development of issuing credit for capital investments. This year allocations for capital investments from the state budget will be curtailed by 7.5 billion rubles and in 1990—by at least 8 billion rubles. The freed material assets will be directed into expanding the production of consumer goods and into increasing market funds of building materials. This presupposes the removal from the plan of 390 newly-begun structures and the preservation of 277 objects. The 1989 plan will exclude large structures such as the Irkutsk GES [Hydroelectric Power Station], the Kustanay GES, the Stavropol GRES [Government Regional Hydroelectric Power Station], the Ingalinsk AES, the Buryat AES and the Karacheyev-Cherkessk Cement Plant.

At the first congress of people's deputies proposals were made concerning a more significant curtailment of capital investments than foreseen by the government program. In our opinion, we must carry out a general inventory of ongoing building and determine the economic and social expediency of the objects being erected, the completion schedule (with a consideration of actual capacities of contract building organizations), the volume of financial resources and the availability of manpower.

A new channel for financial health involves curtailing defense expenditures. In 1987-1988 military expenditures were frozen. This resulted in a budget savings of 10 billion rubles (in comparison with what was planned by the five-year plan). In 1989 military expenditures equal 77.3 billion rubles, as recently stated. This amount includes not only ongoing expenditures for the maintenance of military personnel (20.2 billion rubles), which was published previously, but also expenditures for the procurement of arms and technology (32.6 billion rubles), for scientific-research and testing-design work (15.3 billion rubles), for military building (4.6 billion rubles), pensions for military personnel (2.3 billion rubles) as well as other expenses (2.3 billion rubles). At the first congress of people's deputies M. S. Gorbachev made a proposal to curtail military expenditures in 1990-1991 by another 10 billion rubles, i.e., by 14 percent.

A number of other measures were indicated for eliminating the budget deficit: decreasing subsidies by one-third to unprofitable enterprises in 1989; improving the structure of organs of government and economic management and curtailing expenditures for upkeep; and the reorientation of import policies, including by means of procuring consumer products, thereby mitigating the imbalance in the domestic market. The entire system of measures to improve finances will enable us, already in 1989, to curtail expenditures and increase income by 29.3 billion rubles; and in 1990—by 33.7 billion rubles.

But financial improvement work is not limited to the aforementioned total of specific measures. At the first congress of people's deputies a number of deputies (G. Kh. Popov, N. P. Shmelev, P. G. Bunich, B. N. Yeltsin and others) supported the need for developing a more radical program of financial improvements. The measures mentioned included the sale of land, a reorientation in the use of hard currency to purchase grain and metals to the acquisition of industrial consumer products, a significant curtailment of incomplete production and the sale of apartments. These proposals deserve careful attention and the USSR Finance Ministry is carrying out detailed accounting with regard to its overall socio-economic and financial assessment.

Considerable corrections must be made within all structural policies. Difficulties in supplying the population with goods and services have their roots in historically-developed disproportions. In creating an economy as a closed system that must provide all types of products, priority was given to the development of heavy industry. If we compare the structure of our industry with the analogous structure in the U.S., West Germany, Japan, Italy and other countries we will see that the proportion of consumer goods and solvent demand are much smaller here, comprising 26 percent, whereas in many foreign countries it comprises 30-35 percent. This is why we must force the development of the entire consumer sector of the economy. The turnover of assets here is greater by a factor of 3-4 than on the average within the national economy, which will enable us to economize on capital investments and to obtain additional savings.

During the 13th Five-Year Plan the growth pace of production of group "B" commodities should increase at least twice as fast as the pace of production of group "A" commodities. The possibilities of defense enterprises and the conversion of the military industry will be widely used to meet this goal.

New management forms are also needed within the sphere of goods and services. It would be expedient to create an entire network of small enterprises that can flexibly react to changing demand among the population. This can be state enterprises or joint-stock enterprises using foreign capital.

Under existing conditions of economic development we cannot achieve financial health without touching the foundation of the financial-credit mechanism. We are speaking about making a transition from a system of uncoordinated measures to developing a whole system of financial-credit regulation of the economy. Today central economic departments, institutes of the USSR Academy of Sciences and other organizations are developing proposals concerning tying together tax, credit and budget policies into a single whole.

As of yet, transformations within the sphere of finance and credit have not touched the foundations of development. Today they stand with one foot in old distribution methods and with the other—in the commodity-financial enterprise. The absence of uniform criteria for measuring expenditures and results, and of uniform legal behavior of various participants in the production and economic process undoubtedly weakens the stimulating action of financial-credit instruments. In today's management models, commodity-financial relations and the market play a secondary role whereas the planning system is the priority. We must turn the existing model around and place the socialist market at the foundation, with the singling out of the market for the means of labor, the market for consumer items, the market for labor resources and the financial-hard currency market.

Planning should proceed from an analysis of market tendencies. Today the most problematic area in planning methodology is the absence of a thorough factorial analysis of the development of the national economy and social processes. This analysis is uncoordinated; within it a very insignificant place is given to the condition of the consumer market and to monetary circulation. An imperative, idealistic approach prevails with regard to what would be desirable to do. If we summarize everything that has been included in our plans, beginning with the first five-year plan, we would long ago have been among the top 10 countries of the world according to standard of living. Planning means projecting the future of the economy and of the life of society; it implies a certain probability. This means that its methodology must be flexible and should not interfere with all that is new, and which arises elementarily within the process of fulfilling the plan. But the main thing is to understand

the prospects for social development, and to study well the conditions of development and the basic economic problems.

An analysis of the market enables us to view economic and social processes as a whole, based on the entire chain of interrelations between the movement of goods and services in a cross-section of branches, enterprises and cooperatives as well as individual social groups. Within a market economy solvent demand is the springboard and the moving force behind all socio-economic development. And this is a rule that applies both to the capitalist as well as to the socialist economy.

Naturally it is incorrect to reduce the role of planning to a blind observation of the tendencies in the development of the national economy. Planning must also include a great deal of information about changes in the society's social structure, in the development of science and technology, in the environment and in the ecological situation.

The main planning object is the development of interrelated economic methods of regulation directing enterprises at the trajectory of economically-expedient development. But it would be incorrect to reduce planning completely to economic regulation and to totally exclude the possibility of administrative interference in the economy. A certain proportion of regulation is needed to maintain stability. This is attested to not only by Soviet but also by Western economists. For example, George Soros in his "Alchemy of Finances: Interpretation of the Market," published in New York in 1988, writes, "The sooner we recognize that a certain amount of regulation is necessary for maintaining stability, the better the chance of retaining the advantage of an almost free market system" (p 323). Of course, not all regulation is the same. Within our system within certain limits not only indirect but also direct regulation can be utilized, as for example state orders. Of course the customer must be solvent in order to be able to pay for his order.

The development of a state-regulated market management system is not a one-time act; it does not yield to decrees. It is a process of replacing forms that have not justified themselves in practice with other, more developed forms. In order that both the seller and purchaser be equal we need a price system for equivalent exchange. It is no less important that the seller and purchaser have equivalent obligations before the state. It is this function that the tax system fulfills.

The tax system is interconnected. This is why we need a development of common taxation principles and a corresponding law. This is an essential condition for movement along the path of the socialist market. Here too questions arise. What kind of taxation system do we intend to create? What is the main objective of taxation—individual income tax, taxation of an enterprise's profits or indirect taxation? As we know, in our budget income from taxation of the population equals 9 percent of the total income, payment from profits—30 percent

and the same amount from taxes on turnover. In the U.S. the picture is completely different. There individual income tax comprises about 43 percent of the budget, taxes on corporate profits—12 percent and excise taxes—3.7 percent. If we approach the taxation system not only from the fiscal position and look at the tax as an important element for regulating the economy, we must deal with the following question: From the point of view of economic regulation and incentives which taxation system is preferable—one based on the maximum confiscation of primary income or one based on the confiscation of income at the final stage of use?

Considering the need to actively include the USSR economy within the system of world economic ties our tax mechanism must encompass the general tendencies in the development of tax systems. This includes a weakening of the tax pressure in taxing primary income to maximally stimulate production and commercial activity as well as to increase indirect taxes and high private income.

First of all, tax reform must include a transition from individual normative payments into the budget from profits to a tax system that looks at all subjects in financial relations equally in terms of social demands on level of management.

Of basic importance is the question of the mechanism of taxation and the structure of taxation rates. Here we intend to draw on foreign experience. Last year groups of specialists travelled to West Germany, France, Canada, Italy and Hungary with the goal of studying the taxation systems. Of course we cannot mechanically take on systems existing in other countries, but we should utilize everything that is positive in them. Theory and experience have not yet provided a uniform recipe for structuring the taxation system. For our economy it is especially important to have an approach to the level of taxation. It must be optimal and include the functions of incentives and of balancing income and expenditures. It would also be expedient to develop a system of tax benefits that would provide incentives for strengthening resource conservation, for renewing production, and for increasing the production of consumer goods and products for export.

If we proceed only from the need to eliminate the budget deficit the tax rate on profits must near 80 percent, which of course considerably narrows the base of self-financing and undermines the stimulating function of profits. The theoretical optimal rate is the amount at which management subjects are maximally interested in profit growth. But even contemporary imitation models do not yet provide a dependable orientation point for practical application.

In the face of sharp differences in the level of profitability among branches and enterprises that has developed historically it has not been possible to establish a single taxation rate. At first it will be necessary to

introduce a limited number of rates depending upon the level of profitability or the profit mass.

As of yet there is no single position on the expediency of maintaining payments for production funds. Under conditions of state property we need a specific financial instrument with the aid of which it will be possible to regulate the level of effectiveness of utilizing public means of production. Payments for production funds serve this purpose. We should keep in mind that as leasing and joint-stock management forms of management and long-term credit develop, the role of payments for this fund will narrow.

Secondly, reform cannot but affect taxes from turnover. It is essential to complete the transition to receiving taxes from turnover for the majority of goods within the production sphere and to use the method of tax rates. Already today we must develop a principally different methodology for determining taxes from turnover and make the transition to taxing increases in cost. The experience of introducing taxes on additional cost in Hungary showed that this is a sufficiently realistic task, but painstaking preparatory work is needed in connection with improving methodological price formation.

Thirdly, considerable changes must be made in the system of taxes paid by the population. In addition to increasing the untaxed minimum of the wage and removing taxes from low incomes, it is just to introduce a progressive tax on incomes that significantly surpass (by a factor of 2-3) the average wage in the country. These proposals have been introduced for general discussion. In the future it will be necessary to follow the path of developing and introducing a universal approach to taxation that will have to be based on taxing annual income received from various sources. Here we cannot do without the introduction of a tax declaration.

Under conditions of an acute imbalance in the market special attention should be given to the question of economic regulation of growth in the wage fund. As we know, in 1988 in industry for every percentage of growth in labor productivity the average wage increased by 1.46 percent, and in the first quarter of 1989 the corresponding figure was even over 2 percent. This drastically alters proportions between savings and consumption.

The USSR Law on the State Enterprise (Association) has determined that enterprises are obligated to achieve a forestalling growth in labor productivity as compared to average wages. With a consideration of unfavorable tendencies in monetary circulation in 1989 controls over the relationship of the most important parameters of an enterprise's operations have become stricter. These regulation methods are imperfect; we must make a transition to judicious taxation of growth in the wage fund. Such regulation methods are used in many socialist and capitalist countries. For example, in Switzerland an agreement has been concluded between the union of businessmen and the trade unions concerning the limits for increasing wages. For example, the Volvo Company,

which increased it wages by over 4 percent in 1987, paid the union of businessmen a fine of 500,000 krone.

An important reserve for financial reform is the development of a market of valuable papers. I am referring to the development of non-traditional forms of financial obligations such as bonds and stocks. Last year the government made a decision about issuing two types of stocks—stocks of the labor collective, which circulate within the enterprise, and stocks of an enterprise, which the enterprise has a right to sell. Of course this is only the beginning period in stock development.

The interest of labor collectives in issuing stock poses a number of fundamental questions which must have precise answers. What is the nature of stock property? Do we even have to speak of stock property? All of this could be reduced to the mechanism of function of state property, but that would not be proper. Not only the mechanism is changing, but the essence of socialist property is being enriched; its ownerless character is changing while at the same time this property is not being transformed into private property because the possibility of exploitation is being excluded at the root.

As an argument in support of this point of view we can look at an analysis carried out by K. Marx and F. Engels of stock property under capitalist conditions. They wrote that stock property "is the result of the higher development of capitalist production, an essential transitional point for the reverse transformation of capital into the property of producers, but not as private property of producers any longer but direct public property."<sup>1</sup> As we can see, K. Marx and F. Engels recognized the possibility of the existence of stock property as the property of associated producers and that "this elimination of capital as private property occurred within the framework of the capitalist method of production."<sup>2</sup>

If we stand on the path of negating the possibility of the existence of stock property under socialist conditions and consider it to be inherent only in the capitalist method of production, the issuance of stock in our country will become some kind of useless game. Then stock will not be able to be used to solve urgent problem related to improving socialist production relations, to enriching forms of property or to more closely uniting private and public interests. Ways are then closed to solving the task of redistributing monetary assets with the goal of more effective production. In other words, the rejection of stock property makes the solution to the problem of activating relations of socialist property unpromising. If we recognize the stock form of property as an internal element of the socialist economy we must find a mechanism for using all of the strong points of this form of socialist property.

Only on the path of stock development can we make a real cost assessment of fixed production capital. Right now the balance cost of stock does not reflect real market value. With a reappraisal in accordance with the demands of scientific-technical progress and the level

and dynamics of the productivity of public labor the major portion of fixed capital will receive a zero evaluation or close to it. At the same time a large portion of the fund will receive a weightier assessment, which will attest to the expediency of the accelerated development of enterprises that have created these funds.

In connection with this we need a scientific development of the problem of determining the course of the stock, the organizational and economic mechanism for selling the stock, including the creation of a stock market and the training of the corresponding specialists who will be capable of providing a synthetic assessment of the effectiveness of capital investments from the point of view of the technical-economic level of production and its scientific-technical potential as well as from the point of view of the analysis of production expenses and profit norms.

Enterprises which are included in the development of the stock form of management, having received the right to independently determine many parameters of stock operations, must also master the innovations in commercial operations.

A small amount of experience shows that many labor collectives have approached the determination of the stock dividend with sufficient care and caution, carefully study prospects for the development of their enterprise, implement a comparative analysis of the most important economic and financial indicators as compared to the same indicators in similar enterprises, including foreign partners, and take into consideration the general economic and financial situation in the country and in its individual branches and regions.

There are other examples in which dividends that are too high at a rate of 15-20 percent are paid out. Moreover, often there is a violation of the elementary requirements for managing the economy as for example achieving forestalling growth in labor productivity as compared to growth in average wages.

In order to lend stock forms of management the necessary legal status we must accelerate the development of a special law on the creation of stock societies. This law must secure the specific nature of stock property and the rights of stockholders in distributing income.

A simpler form of attracting monetary assets is the bond. Already today it is possible to issue state automobile loans in order to force the building of the Yelabuzhskiy Automobile Plant, considering the solvent demand of the population.

The bank system, which includes the USSR State Bank, specialized banks that function within certain spheres of the economy as well as an extensive network of commercial banks, is undergoing considerable restructuring. Today over 100 commercial bank networks have been created.

Considering the acute nature of monetary circulation we must increase the role of the state bank in determining

the mass of money in circulation and in formulating an active credit policy to make sure that unsecured money does not enter into economic circulation.

In order to create great incentives for saving and to avoid the pursuit of goods by money it is expedient to increase the interest rate for credit. Today Promstroybank [Industrial Construction Bank] asks 2 percent for long-term credit, and Agroprombank [Agro-Industrial Bank] asks even less—0.75 percent. Average interest for short-term credit fluctuates between 1.5 and 3.5 percent. These interest rates should be reassessed and raised. A concern is expressed that an increased rate will have a negative effect on the financial situation of the enterprise. I do not think this is so. Enterprises must know the real price of credit. Under conditions of a budget deficit credit interest must naturally increase.

Evidently it would be expedient to also increase interest for savings of the population somewhat depending on how long the savings is kept in the account. At the present time the average interest rate is 2.4 percent. This could be one way to encourage people to save, thus decreasing ongoing demand for goods and services.

An integral part of financial reform is the implementation of a stepwise transition to the development of a financial base for regions and local soviets on the basis of stable economic norms. Whereas today the income base for the budget is created on the basis of the expenditures of union republics indicated in the plan, today expenditures must correspond precisely to earned assets. Of course the implementation of the principle of self-financing requires the delimitation of income entering republic budgets and the union budget as well as expenditures made in every link of this system. The proposed restructuring of payments into the budget consists of having all enterprises regardless of subordination make their contribution to the formation of income in the union budget. Today, as we know, enterprises of republic subordination do not have any obligations as concerns the union budget. On the one hand this gives rise to a striving to have more enterprises of local subordination on your territory and fewer enterprises with union subordination. On the other hand enterprises with union subordination must provide the republic and local budgets with a portion of their profits and circulation taxes according to established norms. To expand the income base for the budgets of union republics it is planned to direct all total payments for land, water and labor resources of all enterprises regardless of subordination into the budgets of union republics.

The model for managing foreign economic ties has been altered. As of 1 April 1989 the right to implement export-import operations on the principle of hard currency self-financing was given to all enterprises, associations, production cooperatives and other organizations, the products of which are competitive in the foreign market. A licensing system is being introduced for the

implementation of foreign economic functions, which should avoid losses to the national economy due to unfair competition.

The rights of enterprises are being expanded in the use of hard currency funds, which comprise about 1.5 billion rubles. According to a decision by soviets of labor collectives the resources of these funds in converted rubles as well as in the national currencies of the CEMA countries can be fully directed into acquiring consumer goods and medical technology, and into strengthening the material-technical base of the socio-cultural sphere; and in freely convertible currency—up to 25 percent of the total amount.

Work is being carried out on the transition, beginning on 1 January 1991, to the use of hard currency exchange rates in accounts relating to foreign economic operations. The intermediate step will be the introduction in 1990 of a 100-percent supplement to the exchange rate relationship between the convertible currencies and the ruble. This supplement will be used only for internal accounts with Soviet enterprises, associations and organizations that supply export goods and that use imported products of a certain limited group of goods with the goal of stimulating exports and curtailing unjustified imports. This measure is one of the first steps in determining the real hard currency exchange rate of the ruble. This will be facilitated by the development of a currency market in the country.

The simplest form of the hard currency market is the implementation of hard currency auctions. At hard currency auctions the purchase and sale using Soviet rubles is planned according to the free exchange of currency funds of enterprises and organizations as well as assets in clearing currencies available on the accounts of the USSR Foreign Economic Bank. With the goal of strengthening auctions using the means from central sources it would be expedient to provide special state currency certificates that would be convertible into any currency according to the wishes of the bearer.

The development of hard currency auctions in the USSR and the gradual transition from them to hard currency markets will become one of the steps in developing the conditions for the introduction of the convertability of the Soviet ruble. The problem of convertability cannot be decided in one step. Hard currency is part of the monetary system and the monetary system is a part of the entire socialist economic mechanism and naturally the degree of development of commodity-monetary relations, the nature of interrelations between the plan and the market, the integration of planning-administrative processes and processes developing out of market tendencies dictate their own logic in approaching a decision to the problem of convertability.

Achieving a convertible ruble means strengthening its purchasing power, the development of export potential, an equalization in ability to compete on the part of extraction and processing branches, an improvement in

the balance of payments, the introduction of a new conversion rate for the ruble and the restructuring of price formation with a consideration of the relationship among work prices. The creation of these prerequisites will require a certain amount of time. In order to have our ruble become part of the international currency system it is essential to understand well and to consider the international regulations for carrying out financial-currency matters. For this reason it would be expedient for the USSR to participate in the International Monetary Fund.

One article cannot examine all of the basic problems of economic reform and financial health. It is clear that they are interrelated. On the one hand reform cannot move forward successfully without an improvement in the qualitative level of the system of state macroregulation of global socio-economic processes. On the other hand macroregulation alone is not enough; it must be coordinated with a strengthening of motivational functions of the economic system on the basis of a variety of forms of property, its personification, and the creation of a financial and credit system innovatively while considering the interests of both the state and the enterprise.

#### Footnotes.

1. Marx, K., Engels, F. Works, Vol 25, Part I, p 480.
2. Ibid., p 479.

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#### Impact of Monetary Balance on Planning Discussed

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[Article by V.A. Rayevskiy, department director of USSR Minfin [Ministry of Finance], candidate of economic sciences; G.Ya. Shakhova, NIFI [Scientific research financial institute] section director, candidate of economic sciences: "The Financial-Credit Mechanism and Material-Financial Balance"]

[Text] The use of financial and credit factors within the economic mechanism and their effectiveness depend to a great extent on prospects for improving financial and monetary circulation. As noted in the resolution of the USSR Congress of People's Deputies, "the positive changes that have taken place in production are being reduced to nothing by the disorganization in the financial system."

Complete cost accounting and self-financing, which have almost become a shining symbol of the essence of change beyond the framework of purely financial problems, place on the agenda problems related to improving property relations and to strengthening the economic foundations of sovereignty of soviets and labor collectives. They presuppose the use of financial and economic priorities when making management decisions in all

links of the economy. However, the free selection of these priorities is possible only with a balance between payment assets that are at the disposal of enterprises and the population and the means of production and consumer goods.

Economic interest in the results of management operations on the part of enterprise collectives and individual workers can be effective only if monetary incentives are accompanied by the necessary offering of goods and services. Of no less importance is the opportunity for an enterprise or soviet of people's deputies to implement decisions related to increasing work effectiveness in the area of production and scientific-technical development from the point of view of material-technical supply.

The destructive effect of imbalance on the most problematic areas of economic reform is being manifested today on the one hand in the greater and greater incidence of conversion of economic ties to in-kind, little interest among enterprises to expand production, the non-objective pumping of monetary assets into branches and enterprises having a monopoly in their sphere of operations and the relatively free selection of a partner via the system of contract, commercial or temporary prices. On the other hand, with the formal decrease in the volume of state orders "limits on consumption" and other similar surrogates of directive allocations of funds for material resources have appeared. Unfortunately, there have been attempts equivalent to these methods to regulate demand and the supply of consumer goods. The reestablishment of balance in the national economy is justifiably considered to be a prerequisite for increasing the effectiveness of the financial and credit mechanism.

At the same time the term "material-cost balance," in our opinion, does not quite precisely reflect the essence of the real problem, a proper understanding of which is necessary for the selection of directions to solve the problem.

The gross public product that is the sum total of all consumer costs and labor expenditures embodied in them is characterized by a unity of material and cost aspects. This means that during the process of producing this product there is a unity of the material and cost aspects. To integrate some kind of sum total of material benefits and reflect it in a single indicator is possible only based on the cost of these benefits. This is why material projections in the state plan of economic and social development have a cost expression. In this way the material-cost balance presupposes a coordination of the essential aspects of the process of public production.

Since the reproduction of the gross public product occurs by means of coordinating the movement of material and monetary resources to links of the economic system depending on the form of the assets, with movement being viewed from the point of view of coordinating formation and use, it would be correct to single out three aspects of balancing economic development. The first is material (material-substance) balance, which is achieved

via the coordination of the production of material resources and their consumption, i.e., of the volume and structure of material assets being produced and the demands of production processes and the population for products of a particular assortment and quality. Secondly, with the balanced development of the economy there should be a coordination of movement of monetary assets, i.e., a coordination between the receipt of assets (which can be income of the state, socialist enterprises and organizations, or the population) and their expenditure within the process of production, distribution, redistribution and the final utilization of the public product. From this point of view one speaks about the financial (monetary) balance in economic development. Thirdly, insofar as the movement of monetary assets at least reflects the movement of material assets while being separate from it and is characterized by a relative independence, material-financial balance is essential for stable economic growth and increased effectiveness of public production. That is, there must be a certain relationship between material funds and financial resources, between the volume of consumer goods and the population's monetary income.

In our opinion, coordination in the formation and use of resources within these three aspects exhaustively characterizes the balanced development of the economy. All three aspects of balance are closely interrelated in terms of material unity and the cost proportions of reproduction.

The fulfillment of the conditions for material and financial balance is reflected in the absence of disproportions between the production and consumption of material goods. Let us remember that in accordance with their economic essence financial resources are a monetary expression of that portion of material goods produced in the course of production that can be directed at final production and non-production consumption. Formation during the production process, distribution and redistribution of the sum total public product of a certain amount of financial assets attests to the presence of the corresponding volume of material stocks. This is why fulfilling the conditions for material-financial balance both in the form of correspondence between total financial assets and the volume of material goods as well as between receipts and expenditures reflects coordination in the volume of resources used for final consumption. The implementation of the aforementioned balance conditions presupposes the possibility of achieving financial (monetary) balance in the economic system.

The achievement of a correspondence between material and financial currents on a national economic scale presupposes the possibility and creates the prerequisites for an uninterrupted and balanced production process in all links of the economic system because it attests to the absence of surplus monetary assets in the economy. This becomes possible if the economic mechanism is supplemented with the creation of a monetary market or its

equivalent. Coordination between the receipt and expenditure of monetary assets in every economic link will result in balanced economic development.

The problem of material-financial imbalance arises under conditions of centralized plan administration of the economy with strict administrative control over prices, when market regulators of the amount of money in circulation and price levels have been turned off. At the same time a great imbalance is one of the main hindrances to the creation of a socialist market in our country.

The main reason for material-financial imbalance is that expenditures are greater than income. In this situation the priority task consists of eliminating the shortage in the state budget. We feel that we should speak strongly against allusions to the experience of capitalist countries, where deficit budgets also exist. The economic situation in those countries is usually characterized by a surplus of manpower and production capacities. Under such conditions increasing total demand, with the aid of advancing resources by means of the budget deficit, can facilitate an improvement in the pace of economic growth. Under the conditions existing in our country excessive growth of expenditures in the state budget, which increases the solvent demand of enterprises and the population, only exacerbates material and financial imbalance.

Keeping in mind today's technique for composing the budget (if we do not include direct relations between budget and population), which looks like the result of putting together all the financial plans of enterprises and the estimates of budget institutions, we can say that not only the budget but this entire totality is in the red.

The two basic groups of reasons for the development of a shortage include low work effectiveness of the branches of material production and passive plan policies. The financial expression of the first group of reasons is the tendency to decrease national economic profitability—the relationship of monetary savings to the cost of fixed production capital and material working capital, and of the second group of reasons—in practical plan activities ignoring the search for plan variants that will facilitate an increase in financial return for branches of material production and balanced income and expenditures for the state.

The data published by USSR Goskomstat concerning the profitability of industry and branches which create over half of the national income show that profitability decreased to 17.2 percent in 1987 as compared to 45.1 percent in 1960. Although this tendency reflects not only the dynamics of profits and production funds within industry itself, but also growth in subsidies as a result of increased procurement prices for agricultural raw materials, by which monetary savings in accounting books decrease during accounting for this indicator, an immutable fact is the decrease by a factor of 2.6 of the financial

return from the investment of assets into fixed production capital and reserves of material working capital. Similar processes are characteristic for other branches of the national economy as well, as for example railroad transport, where profitability has decreased from 14 percent in 1970 to 4.6 percent, and motor vehicle transport—a decrease from 32.5 to 14.5 percent. A decrease in indicators of effectiveness in material production branches had a negative effect on the most important national economic proportions and on the balance of financial resources.

The high level of materials and energy intensiveness of the branches of material production together with the inefficient export structure have brought about an increase in capital investments into the extraction industry and in general into the raw-materials group of branches. Since in these branches a large portion of capital investments is used only to support extraction on a base level, this has resulted in a decrease in the return on capital in general throughout the national economy. With a low level of use of production capacities, especially in the processing industry, an increase in production volume was achieved

by means of an increase in capacities, including the building of new enterprises. All of this resulted in an increase in the proportion of group "A" enterprises and in the proportion of production of the means of production for producing the means of production and in decreasing the material base of production development in the area of consumer goods. As a result the volume of industrial products in group "B" decreased to 24.8 percent on the average for 1986-1987 as compared to 26.4 percent in 1971-1975. In general the share of the second subdivision within the structure of the total public product decreased to 35.7 percent in 1987 from 37 percent in 1970.

Greater growth in the first subdivision is occurring while the large proportion (about two-thirds) of production of the means of production in order to produce the means of production is being retained. The fact that such a large portion of production of the first subdivision is used for "self-reproduction" and that the tendency for this share to grow attests to considerable reserves related to increasing the effectiveness of utilizing capital investments. We can judge about the great reserves found in increasing the effectiveness of capital investments by the dynamics of an indicator such as growth in industrial production per ruble of capital investments (see table).

Growth in Industrial Production per Ruble of Capital Investments (Kopecks per Ruble; in Comparable Prices)				
1960-1970	1971-1975	1976-1980	1981-1985	1986-1990, according to the five-year plan
92	83	52	44	43

The negative effect of the existing material structure of public production on the balance of financial resources is based not only on the great capital-intensity of the group "A" branches but also on a slowdown in the pace of growth of national income. In the first subdivision the materials intensity of production is greater by a factor of 1.2 than that of the second subdivision. The norm for the additional product in the second subdivision is greater by a factor of 1.5 than in the first subdivision.

Of great importance is the fact that in branches of the first subdivision in terms of production cost the proportion of the wage fund is greater. This results in the fact that in national income there is an objective tendency toward growth of the proportion of the wage fund and a decrease in the share of the supplementary product. At the same time practical control over the relationship between the increase in wages and productivity becomes much more complicated because even with adherence to plan coordinates growth in wages is not equivalently reflected in the production of goods and services.

This means that one of the first problems, the solution to which will affect the achievement of material-financial balance, is the creation of conditions stimulating growth in the financial return of the branches of material production. Today a situation has developed in which budget receipts from material production branches (without a consideration of income and expenditures related to foreign economic operations) are practically equal to budget allocations, including subsidies to cover

differences in prices and expenditures for science. In other words, branches that create new values do not secure a significant portion of state expenditures for socio-cultural needs, defense and management. Reserves for eliminating the imbalance by means of this portion of state expenditures undoubtedly exist. For example, this year a decision was made concerning a considerable curtailment of expenditures for defense and management. But there are enormous lags in the development of the social sphere, for the elimination of which considerable resources are needed.

In connection with the fact that at the present time a smaller portion of state investments into branches of material production is implemented by means of direct allocations from the budget, the system of financial relations, orienting every management nucleus toward comparing planned expenditures with their own income and toward a balanced approach to determining plan goals and tasks is very important. Up until now the balanced approach was interpreted only as the obligation of the higher-standing link to provide monetary support when there was a shortage of internal financing sources. We feel that this was one of the main factors in decreasing the interest of enterprises and branches in the growth of financial return of state investments and in the destabilization of the financial balance.

Very little was changed in this regard by the economic norms established during the transition of the enterprise to complete cost accounting and self financing. The basic

method for their development was the mechanical "turning aside" of interrelations with the budget, an approach that was far from normative, requiring equal intensity when establishing the profit quota subject to direct deposit into the general state fund of financial assets. This is attested to by the considerable variation in norms—from 70-80 percent confiscation into the budget to complete freedom from payment. From this we draw the conclusion that the norms are based on principles that are far from genuine balance principles, in which expenditures are measures against income. A scientifically-based approach that corresponds to the demands of work according to complete cost-accounting and self-financing and to determining payments into the budget from profits can be achieved only with a transition to tax principles of organizing normative-distribution relations. This does not at all mean that a quota must operate in the form of a norm that is the same for everyone. With the conditions stipulated in the law on taxation of profits, with the system of incentives and benefits, and with the contribution of assets by enterprises to solve economic and social development tasks put forth for the corresponding period in the national economy, the quota can be made more precise.

An objective approach is just as important in determining allocations from the budget. If we preserve the remainder principle for allocations to cover the shortage of an enterprise's own assets, in practical terms there will be a nullification of the potential possibilities of a transition to taxation of profits. Expenditures and objects supported by the general state fund of financial resources must be clearly defined and related to structural changes having interbranch and territorial significance and a national economic priority. Only with this kind of twofold approach is it possible to restore the balance principle when organizing financial relations within the branches of the national economy.

We would like to say a few words about subsidies, which comprise over one-fifth of budget expenditures. Almost all of them are related to the financial support of the agro-industrial sector. Under conditions in which a solution to the food problem has not been found, the task of partial or complete rejection of these subsidies must be delayed and related to measures to change economic relations in the village that are being called upon to increase the effectiveness of this sector. To a large extent these expenditures are related to socio-cultural factors because they are directly related to the level of retail prices. The concept of future price reform foresees full compensation to the population for the possible increase in the cost of living. For this reason the elimination of subsidies will not result in a decrease in the general volume of state expenditures.

Still we must speak about the need to develop organizational-economic measures which will (possibly stage by stage) enable us to solve this problem, since it is difficult to deny the negative effect of the existing practice of many aspects of economic life. All of the basic structural proportions of public production<sup>1</sup> and the economic

accounts related to the effectiveness of state investments are deformed since profits for producers of goods and consumer expenditures are assessed differently. To a large extent the interest in the efficient utilization of assets and in decreasing production expenses is exhausted because sooner or later they are covered by increased prices and budget subsidies. We cannot recognize as healthy economic relations in which an increase in the production of goods needed by the people becomes an additional factor in the destabilization of the financial balance.

The anti-expenditure direction of the financial-credit mechanism, from the point of view of prospects for achieving material-financial balance, must facilitate an increase in the financial return of the branches of the national economy, the expansion of their own financial base and a relative decrease in the need for additional state investments for their development. However, the scale of violations of equal balance for today are such that bringing these internal reserves of effectiveness into action without a serious structural remodeling on the basis of centralized plan decisions is impossible.

A structural remodeling of the economy, achieving its material and financial balance, must be presented as a priority approach to developing a draft of the plan for 1991-1995 and the subsequent period.

The dynamics of state financial resources and expenditures shows that the elimination of imbalance in the national economy requires considerable changes in the relationship between the first and second subdivisions of the public product, between savings and consumer funds in the national income and between the production of goods in groups "A" and "B" in industry. Here the proportion of the second subdivision in the total public product in plan projections must be foreseen at no less than 40 percent, and the share of the consumption fund in national income—at no less than 80 percent. A decrease in the proportion of the first subdivision must occur with a considerable curtailment of the proportion of production of the means of production for the production of the means of production.

The proportion of products in group "B" must be increased to 35 percent of the total volume of industrial products. To do this there must be a sharp increase in capital investments in the development of group "B" branches—about 25-30 percent of the total volume of all industrial investments (from 11-12 percent at the present time). On this basis we can foresee a more rapid forestalling of the growth pace of products in group "B" as compared to group "A"—by a factor of 2.5-3 or more than planned until now. An increase in the proportion of products from group "B" from 25 to 35 percent with this kind of restructuring of state investments for the five-year plan will achieve a growth in monetary savings of about 90 billion rubles.

It is no less important to foresee in the plan draft the correct selection of an investment structure for developing group "B" branches. The most promising appears to be increasing investments into production of cultural-consumer goods, especially long-term goods. Characteristic of this group of goods is less dependence on the raw materials base, if the population's supplies are low. Moreover, this kind of maneuver is made easier by the process of conversion of the defense industry.

Structural remodeling must unavoidably touch on branches in group "A." As experience shows, without this it is impossible to considerably regroup and decrease investments in the most capital-intensive branches. In all branches there should be a thrust toward a more thorough restructuring of raw materials and materiel, an introduction of material- and energy-sparing technology and the production of products that will achieve the conservation of resources in consumption.

We cannot repeat the mistakes of the 1985-1990 plan, in which the achievement of production growth indicated in the plan by means of a savings in resources did not go beyond the limits of material balances, was not secured to the necessary degree by a structural change and the introduction of scientific-technical achievements and a system of plan orientation points precisely for branches of the national economy and enterprises. As a result an actual reexamination of balances was required, as well as an allocation, above five-year plan estimates, of additional assets for investments into branches of the fuel and energy complex and for the production of construction materials as well as to provide material incentives for above-plan production output.

An increase in state investments into the aforementioned priority directions must be achieved with a decrease in general volume to a level that will provide balance with the production capacities of contract organizations and with the material base—the availability of building materials and equipment.

Capital investments should be allocated primarily for objects being built according to plans that take into account the achievements of scientific-technical progress. Our goal should be to reach progressive norms for incomplete construction by the middle of the 13th Five-Year Plan. It is possible that this will require a non-departmental inventory of objects and decisions on retaining many of them, reprofiling of enterprises or selling them to the cooperative sector. This measure may result in a great economy of state assets in the course of the five-year plan.

As an instrument for obtaining material-financial balance it is essential to fully provide for a free financial balance. It must realistically reflect the level of balance of state finances and foresee the consistent elimination of the deficit.

In current planning practice the possibilities for a consolidated financial balance have not been realized. This kind of consolidated balance is used formally in the

planning process. The plan is not formed with a consideration of financial resources; instead indicators of financial balance are miscalculated based on plan tasks. The underestimation of the role of a consolidated financial balance results in the fact that the state plan is developed in the absence of limitations on the part of financial assets. To a large extent this can explain the imbalance, which naturally results in a deficit in the state budget.

It is important to utilize a consolidated financial balance for the timely disclosure of an imbalance in plan projects and of a deficit in the state budget at the very earliest stages of planning. This becomes possible as a result of the interrelationship of the movement within the process of reproduction of financial resources and their material bases. The financial resources created during the planning period must be compared to the volume of monetary assets directed at the financial expansion of production and at other general national needs. Exceeding the planned volume of state financial expenditures over the amount of existing financial assets attests to the need to change the planned pace of economic development and material proportions in the plan. In this case proposals must be made concerning correcting the planned volume and production structure with the goal of increasing developing financial resources.

The development of a balanced consolidated financial plan must be accompanied by the correction of initial important economic and interbranch public production ratios, the volume and structure of export and import, indicators characterizing the standard of living of the population and so forth. Balance in the consolidated financial plan is possible with this kind of structure for production, distribution and use of the total public product, which secures coordination between material and financial aspects of the reproduction process.

To check the material-financial balance of the state plan it suffices to develop a consolidated financial balance in aggregate form. Of primary significance here is the possibility of creating variant accounts within a compressed period of time and with the fewest labor expenditures. It would be expedient to create such a plan on the basis of a system of accounting norms that reflect the size of financial resources per unit indicator characterizing the material result of public production during the plan period. The accounting of plan norms for financial return and financial capacity must be based on a recognition of the laws for their formation, on a careful analysis of influencing factors, and on a consideration of changing reproduction conditions. By having at our disposal plans on volumes of total public product, national income, and volume of production of the most important branches of the national economy, it is possible already at the beginning planning stage to determine the corresponding amount of state financial assets and expenditures as well as to formulate proposals on balancing them.

After establishing plan macroproportions of reproduction that achieve material-financial balance in general, during the process of elaborating a final variant in the consolidated financial balance conditions should be created for the uninterrupted work of every economic link. This results in the need to compose a consolidated financial balance in a more detailed form. It must be presented with a system of tables containing generalized characteristics of the most important aspects of forming and using the state's financial resources. In particular, with a consideration of the development of territorial cost accounting it is expedient to compose one of the tables of such a balance in a territorial cross-section. One of the consolidated balance tables must be built according to the program-special purpose principle with the singling out of the basic comprehensive programs which must be implemented during the plan period.

Under conditions of the transition of all branches of the national economy to complete cost accounting and self-financing the financial balance acquires an independent significance reflecting both income and expenditures from the centralized fund of financial assets built in accordance with the plan prospects and with the annual breakdown. Expenditures must be recognized as limited when developing a budget for the subsequent year and should be altered only in accordance with the planned income volume.

Increasing the role of the consolidated financial balance and the implementation of a complex of measures to balance it in the process of national economic planning will place a barrier on the path of the continued strengthening of imbalance both in the production as well as in the consumer sectors of the economy.

Under conditions of expanded independence of the basic cost accounting link and the transition to wholesale trade in products earmarked for production and technical purposes and to contract relations between enterprises, the main task of centralized planning is becoming not the direct distribution of material and financial resources but the establishment of economic norms and tax rates. The five-year consolidated financial balance can and must serve as the basis for accounting. With the transition of centralized planning to a normative foundation such norms will facilitate the implementation of a single policy in the formation and use of financial resources.

To increase the effectiveness of consolidated financial planning in achieving balance of the state plan further improvement of its methodology is essential. In the form of basic directions it is possible to point to the organization of the system of indicators for the consolidated financial balance with the goal of reflecting the new management conditions; the achievement of mutual coordination with other national economic balances and financial plans of branches and regions; the extensive use of the normative method for aggregate variants of accounts in the consolidated financial balance during the initial planning stage; the development of a new technology for consolidated financial planning on the basis

of a systematic use of economic-mathematical models and electronic computer technology.

We should have a very careful attitude toward proposals on including credit resources in financial balance accounts. A credit system that tolerates the transformation of short-term resources into long-term credit and budget allocations makes a considerable contribution to strengthening material-financial imbalance. The use of short-term credit resources for achieving investment expenditures means that the monetary savings earmarked previously for this purpose are replaced by credit. As a result the volume of monetary resources allocated to expand public production exceeds the amount of actually-created financial resources that can be directed into these goals on an economically-justifiable basis.

Short-term credit resources began to replace financial resources beginning in the late 1960's (to make up for differences in prices for agricultural products, norms for enterprises' own working capital, to make up for the shortage of such capital when issuing credit: in sovkhozes—for growth in the basic herd, and in kolkhozes—for capital investments and so forth).

From the point of view of achieving material-financial balance in the economy it is considered to be intolerable to direct short-term credit resources into crediting of investment expenditures as well as to strengthen long-term credit resources by means of short-term. In the practice of credit planning there must be a separation of credit resources according to their economic essence and loans should be issued according to their reproduction direction into ongoing and investment expenditures. Consequently, the attraction of credit resources to financial plan accounts is possible only under conditions of a precise demarcation and basis of amounts related to long-term and short-term investments as well as of a substitution for addressless borrowing to cover the imbalance in state income and expenditures by investments into specific areas of primarily production operations with responsibility displayed by actual management structures.

Improving the proportions of public production will require serious efforts and sequential stages of decision-making in coordination with average and future plans of economic and social development. A direct relationship to solving the problem exists in the implementation of the principally-important economic and social measures which require great preliminary elaboration and foundation. The main measure involves improving wages in connection with determining guarantees of social security for various groups of the population, improving the price structure and the very system of price formation, and the departure from direct or veiled distribution of material resources independent of the financial implications of their use and of the availability of monetary equivalents for the consumer.

For this reason it is very important that the financial balance not be a passive reflection of the relationship between income and expenditure but that it reveal the reason for a deficit if one exists. The possibilities for realizing this task can be seen in composing financial plans (budgets) of large national economic programs requiring great state investments. The practical majority of them at the present time are being worked out prior to the composition of the plan and not in relation to each other, or even worse, they appear when the national economic plan has already been made up.

Indicators of financial effectiveness of state investments, even when the topic under discussion is the development of branches of material production or the economic assimilation of new territories, are presented very poorly; in the best cases accounts of volume of capital building sometimes are far from reality. With the development of these programs there is practically no economic limitation to implementation. As a result in the process of plan formation it happens that there is a shortage of available resources to fulfill programs. "The cutting" of programs finally removes the responsibility from program developers to provide a justification for their accounts.

We might propose confirmation of, in addition to the fully balanced USSR State Budget, the budgets of one or two of the most important national programs, at the first stages of implementation of which expenditures for capital investments, scientific-research and experimental-design work and their introduction into production are not covered by received income (they must find an equivalent expression in the state's financial plan on a preliminary basis). Supplementary assets are allocated by means of bank credit or voluntary loans distributed among the population. Both of these in contrast to the current addressless borrowing will take on a totally different character in this case. Here many methodological problems arise, especially in determining the economic effect on related branches or in the social sphere. With the scientific non-departmental appraisals of similar calculations corresponding sums could be allocated on a supplementary basis from the budget to partially cover deficits in the financial plan (budget) program. This will provide a responsible approach to the volume of financing and the financial effectiveness of investments on the part of program developers and of central planning organs examining their foundations. Of no little importance is the fact that the formation of financial plans (budget) of national programs will achieve, with realistic financial-economic accounts, a procedure for having the government and USSR Supreme Soviet examine them as a part of the plan of the USSR State Plan of Economic and Social Development and the USSR State Budget.

#### Footnote

1. Here we are focusing attention on the mistake of directly comparing state budget income and national income, which is sometimes done by economists to

confirm the thesis of excessive centralization of national income. In determining the size of national income produced and the size of subsidies from the state budget, the clear income of the government decreases by the compensation for differences in prices for agricultural products; however, in the state budget the size of the subsidy is included among expenditures. This is why in order to have a real assessment of the degree of centralization of national income it is essential to compare the final balance of state budget income (size of payments according to differences in prices) with the amount of national income produced. Based on this the proportion of national income redistributed by the state budget equalled 58.8 percent in 1986 and not 71.4 percent.

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#### Hidden Inflation Distorts Investment Statistics

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[Article by V.K. Faltzman: "The Statistics of Perestroyka and the Perestroyka of Statistics"]

[Text] The article examines certain alternative methods of measuring the dynamic behavior of fixed capital, capital investments, indicators of scientific-technical progress [NTP] as they relate to the theory of economic growth. It analyzes the methodology and certain results in measuring the price increases of capital goods produced by machinebuilding and capital construction. The case is made for a number of proposals to improve statistics on investments and innovation and macroeconomic statistics.<sup>1</sup>

In the initial stage of restructuring the economy, its basic idea came down above all to speeding up economic growth as an alternative to the stagnation and slump that had preceded it. But it soon became obvious that it was not the growth rates of output in and of themselves that were important to the historical destinies of socialism, but the actual satisfaction of the needs of the population and society. The question arose of the legitimacy of using growth rates of national income as the main measure of the economic results of perestroyka at a time when the structure of production had to be rapidly adapted to new social needs and when indicators of quality and price were supposed to replace quantity.

This put the procedural deficiencies and difficulties in statistical measurement of the national income into sharper perspective. The growing discrepancy between the product's price and its quality and between value indicators and the volume of production in physical terms had decisive influence in distorting the national income's growth rate. Cost-based operations, the immensely high resource intensiveness of production, and losses of raw materials and products unprecedented in their scale contributed for a long time to the vigorous dynamic behavior of our economy when the final results in social terms were less than modest. The national

income grew while at the same time a sizable portion of the output was lying in above-allowance inventories, as well as in work in process and construction. Changes in the volume of output subject to the turnover tax and the growth of subsidies had an appreciable influence on the rate of economic growth. Finally, as A. Bergson once pointed out [14, p 180], rates of economic growth depend essentially on the year whose prices are taken as the basis of comparison in making the calculation.<sup>2</sup>

On the threshold of perestroika, statistical studies were done that were critical of the growth rates of output and

	USSR Goskomstat	G. Khanin	A. Bergson (Western Index)
National income	88.8	6.6	10.9
Fixed productive capital	63.3	9.6	51.0

Each of these estimates, of course, deserves critical examination. But in this connection we cannot but note at least two circumstances remarked by R. Ericsson [17]. First, if we assume, consistent with the data of USSR Goskomstat, that the national income of the USSR grew almost 90-fold over this period, then by 1985 its size would have been approximately twice that of the national income of the United States. However, according to figures of Goskomstat, the national income of the USSR in 1986 was 64 percent of that of the United States [2, p 623].<sup>3</sup> Second, regardless of who is closer to the truth—A. Bergson or G. Khanin—these figures suggest a devaluation of macroeconomic conceptions.

It needs to be noted that the Western growth index is closer to the estimates of G. Khanin for the national income and closer to the figures of USSR Goskomstat with respect to dynamic behavior of fixed capital. If we interpret this difference in terms of the factors of economic growth, then we can suppose that the Western specialists are inclined to more cautious estimates of the hidden inflation of the investment ruble in the national economy of the USSR, thereby exaggerating the growth of fixed capital correspondingly.

Discussion of economic growth among Soviet economists is drawn not so much to looking far back in history as to the current moment, and not so much to quantitative as to qualitative results. The scientific result of that discussion was the theory of the new quality of economic growth, which has now been given official state recognition and is being energetically developed by scientists.

One of the founders of that theory, A.I. Anchishkin, identified two main characteristics of the new quality of growth. The first of them is the radical shift in its sources, the most important of which is scientific-technical progress (NTP). The second is its real embodiment, the substance of the volume indicators. A study of this category led A.I. Anchishkin to the conclusion that fundamentally new approaches with no analogs in the past are needed to the measurement of economic growth [1, pp 3-5]. One such approach, in his view, is to study investment and innovation as factors in economic

the specific indicators of economic efficiency derived from them (for example, see [3, 6]). Soviet and foreign statistical discussion about the rates of economic growth in the USSR [7, 17] and the so-called "Western discussion" (1984), devoted to discussion of the data on investments of USSR Goskomstat [15, p 415], coincided with the beginning of perestroika.

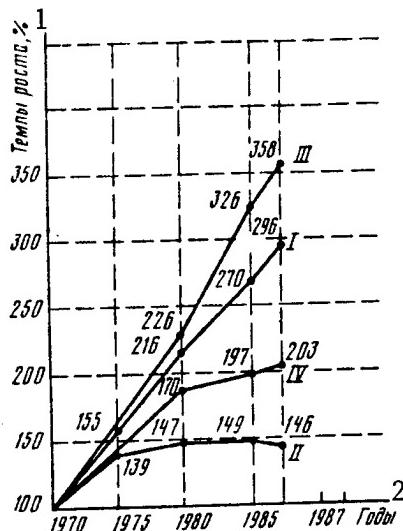
The following estimates of index numbers of the growth of the Soviet economy over the period from 1928 to 1985 are given in [17, p 14].

growth, since the reliability with which they are measured decisively determines the soundness of estimates of indicators and rates of economic growth.

To that end, the author has investigated the nature and reliability of certain statistical observations in the domain of investment and innovation processes over recent decades. If these disparate studies are represented in the form of an overall conception, it would fit into the scheme set forth below.

Research on the rising expensiveness of the products of machinebuilding (the price per unit of the equipment's productivity) and of capital construction (the price per unit of production capacity and power rating) served as the basis. The graph presents figures which make it possible to evaluate the measurement of the increasing expensiveness of capital goods by means of two methods that yield the highest estimates of the development of this process. Below we will discuss both these and other methods of direct and indirect measurement of rising expensiveness from which one can obtain a number of alternative quantitative estimates of it. At this point, we would mention two circumstances important to further understanding of the design of the research.

First, although the methods used in estimating the increasing expensiveness of the capacity of the equipment produced and the power rating of the total stock of equipment were completely independent and based on different sets of data, the results of the measurements not only coincided in their trend, they even proved to be quantitatively close. The increasing expensiveness of equipment was defined in these calculations as the ratio of the growth of its production expressed in value terms (over the last 17 years this indicator has risen approximately threefold) and in units of power rating (productivity), which grew only 1.5-fold. Thus, the average price of machines per unit capacity doubled. The increasing expensiveness of the power rating of the stock of equipment was 1.8-fold over that same period when calculated as the ratio of the growth rates of the active part of fixed industrial productive capital and the power rating.



**Estimates of the increasing expensiveness of the unit of equipment's productivity and of power rating:**  
**I—production of equipment in gross terms;**  
**II—production of equipment in power rating units;**  
**III—active part of fixed productive capital;**  
**IV—power rating of all equipment in industry.**

**Key:**

1. Growth rates, percentage
2. Year

Second, the rise in the expensiveness of the production of equipment per unit of its capacity, which was fully manifested even in the mid-seventies, intensified appreciably in 1986 and 1987. The price rise per unit of capacity of the stock of equipment speeded up during those 2 years. In our opinion, this result was the consequence of intensification of cost accounting (khozraschet) and independence of enterprises at a time when a machines and equipment market did not exist, a market that would have guaranteed competitiveness and would have given the consumer some control over the price and quality of machines.

As the value indicators of the volume of production of equipment broke away from the physical indicators, there was a drop in the level of satisfaction of the economy's requirement for machines produced in the country and a corresponding increase in their importation. A statistical paradox came about in which an appreciable advantage of growth rates of the gross output of machinebuilding, specifically manifested in an increase of its share in the output of industry, was not only not accompanied by a drop in the share of the satisfaction of requirements by imported equipment, but rather by a rapid increase in that share (the ratio of imported equipment to total capital investments to acquire equipment grew from 15 percent in 1970 to 38 percent in 1985). This paradox became truly dramatic in 1986 and 1987; while the "gross" of machinebuilding grew at very high rates, the volume of production of

domestic equipment in units of productivity began to drop in absolute terms, when at the same time there was a decrease in imports of machines.

Since the activation of production capacities is determined by the aggregate productivity of equipment, declining growth rates of the former of these indicators, not to mention negative ones, will inevitably result in an absolute reduction of the latter indicator. This hypothesis was confirmed by autonomous statistical computations: over the period 1976-1980 aggregate activation of production capacities in industry proved for the first time to be absolutely smaller than in previous FYP's [4, p 135]. This kind of investment in the economy was a prerequisite for a subsequent slowing down of economic growth.

The negative growth rates of the activation of capacity were, of course, a consequence of the increasing expensiveness not only of equipment, but also of the product of capital construction as a whole. The average annual growth rates of the capital intensiveness of capacities activated was 5 percent in industry even in the period 1971-1975, while over the period 1976-1980 it was 7.5 percent [4, p 136]. An abrupt qualitative change was concealed behind this quantitative growth: whereas in the 1st half of the seventies capital investments rose faster than capital intensiveness of capacity activated, which made it possible to offset their increased expensiveness, at the end of the seventies the growth of the capital intensiveness of capacity activated exceeded the growth of capital investments. The "compensation" was removed from the "defect" in capital construction, and this took the form of the widespread failure to fulfill plans for activation of capacity.

The faster the increase in the expensiveness of the end product of capital construction—installed capacity—by comparison to the growth of capital investments, the larger the failure to fulfill plans for activation of capacity, the more stochastic, unmanageable, and unpredictable the formation of the productive plant became. Accordingly, nodes of imbalance occurred in many branches and production groupings, which often were not even related to one another. Beginning in 1977 and 1978, then, there was a large-scale drop in the coefficient of capacity utilization in practically all branches of industry. By contrast with other indicators measuring utilization of the productive plant, this indicator maintained its growth trend all the way up to the mid-seventies. But then it suddenly began to drop rapidly—the average for the industrial sector dropped from 0.93 to 0.86 [4, p 116].<sup>4</sup>

Thus, the increased expensiveness of the products of machinebuilding and capital construction had by the end of the seventies brought about in the national economy the conditions necessary and sufficient for a subsequent decline of rates of economic growth: there was an absolute drop in the activation of production capacity and in the coefficient of its utilization. At the same time, the

statistical event of the increased expensiveness was manifested in the fact that the volume of output in value terms continued to increase rapidly, giving rise to illusions that development was highly dynamic and was intensifying.

This can be illustrated with figures on the results of capital construction over the 1st half of 1988. During that period, the plan for activation of production capacity was not fulfilled; only 101 projects were delivered for operation out of the 171 projects in the state order. This difference was enough to disrupt the internal consistency of the plan and to cause a deterioration in the utilization of the production potential. As a matter of fact, a survey of 451 projects of greatest importance to the national economy that were activated in 1987 and 1988 showed that their average utilization was 76 percent. The time allowed for bringing projects up to rated capacity was exceeded at more than 60 percent of the projects. The average level of the load at those projects was only 54 percent. A number of production operations were idle.

Under those conditions, it would seem, indicators of capital construction should have provided evidence of the sector's economic collapse, and indicators for the entire economy should have shown a further growth of the manifestations of crisis in the economy. However, according to the data of USSR Goskomstat, capital construction was functioning with exceptional success in the 1st half of 1988, the volume of contract work rose 6 percent, labor productivity 7.9 percent (more than in the United States and even in Japan), and the plan for contract work was fulfilled at a level of 103 percent. The drop in the growth rates of social production was overcome in the economy, and an acceleration was achieved with respect to a number of the most important indicators. The national income grew 5 percent over the 1st half of 1987, and the productivity of social labor rose 5.5 percent [5, pp 30-33].

Since the volume of output and the macroeconomic indicators derived from it are determined by the activation of capacity and by its utilization, the figures given above should be regarded as a statistical paradox. At a time when the output of machinebuilding and of construction was growing rapidly in value terms, but in real terms was experiencing an absolute decline, it was not precluded that the negative growth rates would spread to the entire output of the economy. One of the possible approaches to estimating the reliability of macroeconomic indicators is to study the reliability of statistical measurements of the rising expensiveness of capital goods.

The results of these measurements were used in the "Western discussion," which we have mentioned and which was devoted to discussion of Goskomstat data on investments [15, p 415]. The main problem which was taken up in the course of the discussion and which continues to be discussed in the journals [15, 16] was

identification of the contribution of the inflation component to the increased expensiveness of the output of machinebuilding and construction. The problem is that the rise in the prices of the unit of machine productivity, just like the increased expensiveness per square meter of production space activated or the average unit of production capacity, is determined in part by the increase in the quality of the equipment and the product of construction as well as by the influence of the natural and regional factors. At the same time, no one has any doubt about the hidden inflation contained in the investment ruble. The participants in the discussion differed only in estimating the significance of the inflation. The reason for these differences, as A. Bergson put it, was that the author's books [3, 4] had not exposed the nature of the investment data clearly and thoroughly, and "the sources from which the data were obtained are puzzling, to say the least" [15]. It accordingly became necessary to examine the methodology used in calculating the increased expensiveness of the products of capital goods sectors from the standpoint of the possibility of breaking down that increase into its inflation and noninflation components.

Statistical analysis of the increased expensiveness of the unit of productivity of Soviet-manufactured equipment was originally based on its direct measurement for certain types and even models of machines. These measurements were done: a) from the data of annual bookkeeping reports of machinebuilding ministries, in which the various types of equipment are given both in value terms (as an element of gross output) and also in units of capacity or productivity (power generating equipment, electrical equipment, certain types of transportation equipment, construction equipment, tractors); b) from the data in price lists (construction equipment, tractors); c) from the data in project studies (metallurgical equipment); d) from the material of specific branch studies (metal-cutting machine tools); e) from the data of a sample simultaneous survey of the relation between wholesale prices and the productivity of new equipment (activated in the period 1975-1977) and base equipment (the equipment replaced), conducted at the end of the seventies by USSR Goskomstat [3, pp 139-142].

Since a direct estimate of increased expensiveness is possible only for those types of equipment whose volume of production is measured in units of productivity (capacity), there always remained the open question of the representativeness of the statistical sample studied, in particular of its bias in the area of large-scale machine production, which specifically has less opportunity for unwarranted raising of prices than single-unit and small-run production. Later, then, another method was used to estimate the rise of expensiveness, a method based on comparison of the rate of output of equipment computed by the method of gross (marketed) output and of equipment supplying power (electric motors, diesel engines, etc.) expressed in units of capacity—kilowatts and horsepower (see the graph).

This method is based on the assumption that the power rating of a machine, although not the only factor, is still the most important factor determining its productivity. So, the growth rate of production of power equipment in units of capacity can serve as an indicator of the dynamic behavior of the production of equipment in units of its rated productivity. This computation can be done either for all equipment produced in the economy or for particular types of equipment, by singling out the amount of power equipment used as a component in the particular type of equipment.

In addition to the two computational methods indicated, an analysis was made of such elements in the change of the price of equipment as the dynamic behavior of equipment installation costs, shipping and procurement expenses related to its delivery, the level of profitability as it relates to production costs of the equipment, the increased expensiveness of metal, and structural changes in output.

The main problem in analyzing the increased expensiveness of the unit of equipment productivity, without which it is practically impossible to single out its inflation component, consists in estimating the influence of

the equipment's quality. In calculation of the increased expensiveness of machines, it is at best possible to identify outlays (but not to evaluate results) to achieve the social benefit (improved ergonomic characteristics of machines, improvement of their safety, and so on). For example, in analyzing the increased expensiveness of tractors and metallurgical cranes it is possible to exclude costs related to supplying them with air-conditioned cabs.

As for that portion of the increased expensiveness of equipment which is related to such elements of the economic benefit as the saving on fuel, electric power, raw materials, and supplies, improvement of the quality of products manufactured with the new equipment, this is not subject to reliable measurement. The reason is that a substantial portion of the high calculated benefit that is to come from each particular type of new equipment, which is taken to justify its price, disappears without a trace at the level of the national economy.

The unreliability of measures of the economic effectiveness of new equipment can be illustrated with the figures below, which were calculated on the basis of publications of USSR Goskomstat [2, pp 33 and 578]:

	1971-1980	1981-1985	1986-1987
Share of the growth of profit resulting from application of measures involving new technology in the total growth of the profit of industry, percentage	131	60	52
Share of actual outlays to apply measures related to new technology in the productive capital investments in industry, percentage	17	19	18

It is evident from the figures given that the benefit from investments in new equipment was 50-60 percent of the total growth of the profit of industry over the period 1981-1987, whereas outlays to apply it do not amount to even one-fifth of capital investments in industry. But if that is so, then why do the other four-fifths of capital investments in industry prove to be so ineffective? If for the eighties this statistical paradox was formulated in the form of a question, for the seventies it took on the character of an imperative assertion: the growth of profit from a small portion of capital investments cannot exceed the total size of its growth, which is what happened in the seventies. We can assume, then, that the calculation of the benefit of new technology lacks any reliability at all.

The systematic error in determining the benefit from new technology is a consequence not only of its being deliberately set too high, but also of the methodology adopted in statistical recordkeeping, above all because of the existence of extensive double counting involved in the gross method of its computation: the size of the benefit is repeated many times as one type of new equipment is used to produce the next product. Given that situation, attempts to calculate the growth rate of expensiveness per unit of the useful economic benefit, which reflects the process of inflation of the investment ruble invested in equipment, must be seen as unsound at the level of the national economy.

What is more, it can be stated that measurement of the quality of the products of machinebuilding and of the price increase resulting from it is altogether unattainable in the context of the economic mechanism now in effect. As a matter of fact, descriptions of the quality of present-day machines are so complicated and diverse that only the consumer can evaluate the advantages of each new machine. That evaluation represents social recognition (or nonrecognition) of the quality, production costs, price, and efficiency of the new equipment relative to the specific conditions of its future use. The consumer is able to make that kind of evaluation only if there is a market. Until such time as a market is created for the consumer of machines and equipment, the task of identifying the inflation coefficient in the increased expensiveness of the product of machinebuilding seems unrealistic. A qualitative estimate of the significance of the hidden inflation of the investment rule in the acquisition of equipment could prove to be more objective. That kind of estimation can be based on a measurement of the dynamic behavior of quality and of the updating of the product of machinebuilding. Here, the point of view that the contribution of hidden inflation to the increased expensiveness of equipment is negligible corresponds to the idea that the improvement of quality has been more dynamic, and conversely, the more modest the achievements in improvement of quality, the closer the inflation rates come to the increase in the expensiveness of

equipment. We should note that the estimate of the dynamic behavior of the quality of products of machinebuilding has independent significance: it is the most important indicator of acceleration of NTP and of the course of the economic reform.

According to official data, in 1986 and 1987 there was an extremely rapid rise in the quality of the products of machinebuilding and of their renewal: The indicator of renewal, which over the previous 15 years had been at a level of 3-4 percent per year, rose to 9 percent, and the share of the most important products of machinebuilding meeting the world technical level reached 49 percent. Because these figures were taken uncritically, they were regarded as the most important achievements of the economic reform, whereas in reality a mistake was made in determining the trend.

In describing the indicator of the quality of products of machinebuilding, I. Pogosov, deputy chairman of USSR Goskomstat, acknowledges that "the information obtained does not afford an objective idea of the state of affairs concerning the problem of the rise in the technical level of products" [9, p 28]. One cannot but agree with such a statement, in view of the fact that such a high self-estimation of the technical level of products contradicts the extremely low share of examples of new equipment exceeding the best world counterparts and the low share of export deliveries in the volume of the marketed output of machinebuilding: according to the figures of USSR Goskomstat, the first of these indicators was 7 percent and the second 5 percent.

I. Pogosov proposes using the share of "exportable" products at the world technical level in the total production in order to arrive at a more objective measurement of the technical level of the products of machinebuilding. In machinebuilding ministries, this share was 16 percent in 1987, i.e., one-third as high as the original estimate of the quality indicator. According to our calculations, based on surveys conducted at one time or another by USSR Minvneshtorg, the share of machinebuilding products competitive on demanding world markets hardly exceeds 5 percent, i.e., it is at least an order of magnitude below the original estimate of the indicator.

When the share of high-quality products is that low, there is no occasion to speak about an appreciable influence of the rise in the quality of equipment on the rise in its price. It is more legitimate to suppose that estimates of the price increase are close to the rates of hidden inflation, at least for recent years.

In recent years, it is true, because of the institution of Gospriyemka, an appreciable rise in production costs to correct products originally rejected and returned to the manufacturer for additional work was recorded. The costs of bringing rejected products up to the level of specifications contained in the standards ought not to influence the rise of prices, since the prices of the products were set on the assumption that they met the standards. That is why a rise in the costs of correcting

rejects should not be viewed as a component of increased expensiveness resulting from improvement of quality.

The threefold growth of the indicator of renewal of the products of machinebuilding over the last 2 years can be classified among statistical paradoxes if we take into account that the number of equipment prototypes newly created in that period not only did not grow, but it even decreased in absolute terms, continuing the trend of past years. Under those conditions, the indicator of renewal could only drop. It has been shown in [11] that the very rapid growth of the indicator of renewal of the products of machinebuilding in reality reflected changes in the methods of calculating it. Often the motive behind renewal of a product was not improvement of its quality, but a rise in its price when the modernization would be negligible. The question has been repeatedly raised in the journals whether the prices of machines are rising when their quality is even dropping? Under these conditions, it is not possible to preclude a situation in which the rates of inflation will even prove to be higher than the rise in the expensiveness of equipment.

The rate of NTP is determined not only by the renewal of the product, but also by the renewal of fixed capital. The rapid growth in the share of outlays for retooling and reconstruction of existing enterprises in the total volume of productive capital investments is customarily viewed as the greatest achievement in the area of renewal of fixed capital. If that were the case, it would seem, one could have expected an accelerated retirement of fixed capital. But in the seventies the growth (by approximately 8 percentage points) of the share of outlays for retooling and reconstruction was accompanied by a drop in the coefficient of capital retirement (from 2.3 percent in 1970 to 1.9 percent in 1980). In the period 1981-1985, the coefficient of retirement did not change, although the share of retooling and reconstruction increased another six points. And only in the last 2 years have trends in the change of these two indicators finally coincided, and by 1987 the retirement coefficient had reached 2.6 percent.

It follows from what we have said that the indicators of the reproductive structure of capital investments, which are customarily considered the most important governing parameters of investment policy, in reality greatly embellish the real state of affairs with the renewal of fixed capital. In many cases, retooling and reconstruction of existing production are more expensive than new construction and often represent a veiled form of expansion of existing enterprises. High rates of growth and progressive shifts in the reproductive structure of capital investments, then, also cannot serve as an indirect confirmation of acceleration of the spread of NTP in the economy and a justification for higher prices of products intended for capital investment projects.

An analysis of the increasing expensiveness of the end product of construction—activated capacities—and of

the growth of the intensiveness of total fixed capital and their active portion has been made with the help of various methods and sources of information. Just as for the unit of equipment productivity, the first estimates were obtained for particular types of production capacities that were distinguished by relative homogeneity of the product mix and the quality of products produced on them (capacities for generating electric power, for mining coal, for manufacturing fertilizer, denominated in conventional units, and so on) [3, p 138]. Later, the coverage of capacities was increased from 30 to 130 items, which made the sample more representative, but aggravated the problem of reflecting the influence of product quality in computations of the rise in the expensiveness of the product. The estimate of the rise in the capital intensiveness of the power rating (see the graph) proved to be the most universal and representative. Here, the dynamic behavior of the power rating was calculated from official publications on the increase in the power-labor ratio and the number of personnel, and then the comparison was made to the dynamic behavior of fixed capital and its active portion.

Just as in the case with the increased expensiveness of equipment, it was not possible to estimate the contribution of product quality to the higher price of capacities for the entire aggregate of entities surveyed. The second step necessary to consistent identification of the inflation component in the higher price of capacities activated proved to be successful: a study was made of the dynamic behavior of those elements of capital investments and of fixed capital which are not related to the activation of capacity. For example, these outlays for capital investment projects include resources to acquire equipment to mechanize and automate production, investments in environmental protection. Aside from that, measurements were made of the increased expensiveness of capacities under the impact of a factor in NTP like the change in the structure of base technologies.

Investment matrices of equipment developed by the author served as the information base for the measurements indicated above. The influence of these factors was analyzed for branches and national economic complexes [3, pp 91-136]. Here, the influence on the increased expensiveness of capacities was estimated through the dynamic behavior of equipment deliveries. For example, the growth of strip mining of coal was manifested in the higher outlays to purchase pit-mining equipment and the reduction of investments in equipment for underground mining.

The influence of imports of equipment on the higher price of capacities, which has been more substantial in recent years, was determined from prices of the domestic market by analyzing various projects and comparing the cost of their capacities with analogous projects furnished equipment manufactured in the Soviet Union. Independent calculations made it possible to eliminate the change in the capital intensiveness of capacities under

the influence of the growth rate of the amount of unfinished construction and uninstalled equipment.

Results of sectoral statistical studies of the dynamic behavior of the estimated cost per square meter of production space activated and also of the increased expensiveness of the output of capital construction under the influence of the natural and regional factors were used in analyzing the increased expensiveness of capacity. The analysis relied on the material of sample surveys of the increased expensiveness of the estimated cost of construction, although these calculations contained an estimate of the increased expensiveness resulting from revision of the estimates in the course of construction and did not take into account the increase in the estimated cost of the given project as compared to comparable projects in the past.

Although none of these methods of measuring the increased expensiveness of the product of machine-building and construction can claim high accuracy of the quantitative estimates, taken together they expose the paradoxes in statistics on investments and innovation. The statistical paradox is the consequence of excessive systematic errors which frequently have generated errors in the trend.

O. Morgenshteyn has convincingly demonstrated that no statistical information is free of error and that statistics on the national income of the United States, Great Britain, and other countries, in spite of the efforts of specialists, contain large errors, revisions of estimates are numerous, and internal consistency is lacking in the revised data [12, p 229]. But this cannot serve as a pretext for Soviet statisticians to be complacent and self-justified: The accumulated national wealth, fixed capital in particular, could be "eaten up" because of mistakes in measuring the dynamic behavior of the national income and capital investments. That is why radical improvement of statistics on innovation and investment and correspondingly in the measurement of economic growth has now taken on the status of a problem of statewide significance. Goskomstat is outlining a broad program for restructuring statistics under the new conditions [9, 10]. Along with expansion of the set of data published, it specifically calls for new statistical observations in the domain of social and political statistics, which are being called upon to characterize democratization of Soviet society, moral statistics, the study of public opinion, other sociological surveys, and statistical analysis of new organizational structures.

The social orientation of economic growth made changes in the content of its indicators imperative. Accordingly, along with the national income data have been published for the first time in the USSR on the dynamic behavior of the gross national product (GNP), which, by contrast with the national income, includes the results of all forms of economic activity, including the nonproduction sphere. Whereas the national income is calculated according to the methodology of the balance of the national economy, the GNP is calculated on the basis of

a system of national accounts. But this change in the methodology of the computations not only does not detract from the problem of reliability of the statistics of macroeconomic indicators, it even makes it more acute.

The reason is that the growth rate of the net output of the branches of physical production has an impact on the rates of economic development computed both by the first and the second method. The problems of reliability of measuring the investment and innovation factors in economic growth which were examined above are also, then, problems for the GNP.

At the same time, calculation of the GNP generates in addition a whole number of problems in the reliability of statistical measurements of services. They include, for example, the following: estimates of services which do not take commodity-money form, of the activity of banks and insurance organizations, services rendered at prices which do not cover the production costs, to maintain housing which is privately owned [13]. The existence of these additional difficulties should possibly be used to explain in part why the growth rates of the GNP appreciably exceed the growth rates of the national income: in 1986 and 1987 they were 8 and 6 percent, respectively [2, pp 10 and 15].

The problems of improving the methodology of calculating macroeconomic indicators that tend to complicate their measurement crop up not only for Soviet statisticians, but those abroad as well. For example, R. Eisner proposes a new approach to calculating the national income and GNP that would be based on the principle of measuring the contribution to the prosperity of society [18]. From the standpoint of this principle, measures of economic growth should not include products for defense purposes, expenditures to finance the police and fire departments, since activity of this kind is an "undesirable necessity" and its growth does not indicate a rise in the prosperity of society. At the same time, the question arises of reflecting more fully and measuring more accurately investments in the human factor and also the products and services of housekeeping.

The problems of measuring services and indicators of social statistics deserve independent examination. Without dwelling on them here, we would like to note that in the opinion of M. Korolev, director of USSR Goskomstat, a substantial improvement in the reliability and quality of statistical information must occupy an important place in the restructuring of the activity of statistical authorities [10, p 11]. In accentuating attention to the problem of reliability of statistical measurements, we should caution against an oversimplified interpretation of reliability. Improving the quality of statistical information cannot be reduced to combating figure padding and window dressing in enterprises and organizations. If the causes of the erroneousness of estimates of statistical indicators of NTP, fixed capital, national income, and so on, could be explained solely in terms of subjective factors, it would be comparatively simple to improve their reliability.

However, the deformation of statistical data results to a considerable degree from the economic mechanism that is in effect. For instance, the pressure exerted by the plan for volume indicators in value terms is conducive to the development of processes of price increases and hidden inflation. In the absence of a consumer market and of competition, this pressure motivates enterprises to solve the problems of their own development by raising prices of products and by eliminating products in the inexpensive assortment from the product mix.

To improve the quality of statistical data, we have to renounce the pressure exerted by the plan not only on the volume of production of gross output, but on all other statistical indicators as well. Experience, of course, shows that indicators do not all show the same tendency to be deformed by the plan. For example, the indicator of profit when there is no consumer market is deformed today just as successfully as gross output. Physical measures of the extraction of raw materials and the volume of production, of primary processing, distinguished by a high homogeneity of composition and a limited set of quality indicators, can by contrast be distorted only with great difficulty.

We might cite the shift coefficient of equipment as an example of an indicator that is not very subject to deformation; in spite of a series of decisions at the highest level, it has not risen for decades. At the same time, as we see, inclusion in the plan of indicators of renewal of products and of product quality, combined with the change in the procedure for calculating them, resulted in sharp distortions of statistical observations. Immense damage has been done to the economy by plans that envisage the forced adoption of robots, machine tools with numerical programmed control, and other new equipment in those cases when this is not economically justified.

Increasing the reliability of the data of statistics on investment and innovation and macroeconomic statistics requires not only a new economic mechanism that would include commodity-money relations of the cost-fighting type, but also new methods of statistical observations. Instead of across-the-board reporting of the bookkeeping type, it would be advisable to apply more broadly sample surveys, anonymous surveys with questionnaires, flexibly combining various methods of statistical observation with automation of the technology of statistics and the transition to the "paper-free" type of statistics.

We have to give up such "naive" things as having people at manufacturing enterprises evaluate product quality, evaluate the increased expensiveness of the product, and make the conversion to comparable prices. If value measures are to be rehabilitated, the lag in the theory of calculating price indices, which occurred because it was assumed that there were no inflationary phenomena in our economy, has to be eliminated. More attention has to be paid to developing the theory of deflators. The methods reviewed above can be applied here as growth

indicators. Without reliable price indices it is not possible to achieve commodity-money balance in our economy and to eliminate shortages.

An analysis of the operating efficiency of machinebuilding, capital construction, the R&D sphere, and construction project planning must be made so as to take into account increased expensiveness and must be based on indicators that reflect the end results, not just the outlays. Otherwise, we will inevitably have excessively high estimates of the saving on metal and other resources and of the rise of labor productivity, which supposedly far exceed the best achievements in the world, but in reality are camouflage for technological backwardness and an unjustified rise in the remuneration of labor.

In the context of the transitional period to the new economic mechanism, it is probably inevitable that the state should control prices by limiting their growth. But this kind of control is made extremely difficult by the cost-plus economic mechanism, since not only the supplier, but also the consumer is interested in higher prices; it provides the latter with an alibi for his own hiking up of prices and for the size of his own profit. Goskomtsen, as we have noted, cannot always keep a watch on the justifiability of higher costs, and once it has allowed an unjustified rise in the price, it is afterward forced to reproduce it many times in time (for the given type of product) and in space—along the manufacturing chain of this product's processing and use.

Calculated prices, which, by contrast with real prices, reflect more fully the change in the qualitative parameters of the product, could be used to calculate rates of economic growth and the dynamic behavior of capital investments and fixed capital. One of the methodological approaches to determining the calculated prices has been proposed by Z. Griliches, who introduced the concept of hedonic price indices and proposed using them to estimate capital and efficiency [19]. The calculations of the hedonic indices are based on regressions in which the parameters of product quality figure as the independent variables. This approach presupposes recognition of the advisability of improving quality and the stability of its observance over the entire product range. It is evident that such assumptions would not always be correct when applied to our conditions.

If the reliability of measurements is to be improved, the statistics of NTP must rely more on physical indicators and on their subsequent synthesis. Among the data that are distinguished by high reliability, we might include, for example, technology structures—the share of the various base technologies and high technologies in the total volume of products in physical terms. The Soviet statistical service publishes about a dozen indicators of the type of the relative share of continuous steel casting in total steelmaking. The increase in the number of these indicators to 100-150 would make it possible to lay a reliable foundation of primary statistical data for making judgments about acceleration of the spread of NTP in the national economy.

Instead of data on great successes in resource conservation, data ought to be published on the immense losses of agricultural products, petroleum, metal, and other resources which the national economy is suffering because of the insufficient spread of progressive technologies. International comparisons of the USSR with other countries should in our view be made not so much for pig iron, gas, and cement, whose production priority indicates the resource-intensive pattern of our development, as for science-intensive products, in particular technically sophisticated consumer goods, medical equipment, the computerization of education, scientific instrumentmaking, i.e., for those fields in which a further lag becomes intolerable.

As a portion of defense capacities are converted to civilian purposes, figures on development of the country's military industrial complex should be declassified.

The reliability of statistical observations can be increased if Goskomstat's monopoly in the field of recordkeeping is eliminated. To that end, it would be advisable to create in large economic institutes, publishing houses, and journals (both those of academies and also of sectors and branches) specialized centers and groups for conducting sample surveys and opinion surveys, and they should be allowed to publish the data and results of their analysis in the open press without clearance with Goskomstat and to carry on a number of discussions of Soviet statistics with foreign specialists. The existence of such alternative sources of information would help to reduce the charge for it which Goskomstat has set at an inaccessibly high level when the transition was made to cost-accounting relations. It is not precluded that a plurality of sources and methods of statistical measurements could free Soviet statistics of the "syndrome of being secondary" to the plan and to planning.

#### Footnotes

1. The conception of this research was shaped over a number of years under the influence of publications, personal encounters, and conversations with two very important statisticians—Ya. Kvasha (USSR) and A. Bergson (United States). The former studied the problems of measuring the intensiveness of all fixed capital and the active portion of fixed capital, the rate of renewal of new technology and the means of labor and production capacity, using indicators of their power for the first time. Back in the fifties, A. Bergson applied physical indicators to the estimation of the real growth rates of investments and of the economy as a whole and studied the process of the increased expensiveness of the products of machinebuilding. This article is a continuation and development of that research.

2. Since the national income has been calculated since 1986 in the new 1983 comparable prices, a certain "splash" of the rates of economic growth that occurred in 1986 (103.5 percent in 1985, 104.1 percent in 1986, and 102.3 percent in 1987) seems in 1988 to require

additional statistical analysis of the influence of the effect of the change in the base prices.

3. A number of similar statistical paradoxes arising out of international comparisons and indicating that the official statistical data on national income have undoubtedly been hiked up is given in [8].

4. The increased expensiveness of capacities activated is the most important, but not the only, cause of the deterioration of their utilization. This deterioration also resulted from the growing imbalance between the increase in the number of jobs and the possibility of filling them with labor resources. It was influenced by the economic mechanism in effect and by the human factor. Therefore, as shown in [4, p 120], utilization of the energy capacity of the productive plant is falling over the entire period of the seventies and early eighties that is studied, and the decline is moreover far faster than the coefficient of utilization of production capacity.

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### Accumulation Patterns Analyzed

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[Article by B.Ye. Kvasnyuk, candidate of economic sciences, Institute of Economics of the UkrSSR Academy of Sciences, Kiev: "Myth of the Excessive Accumulation Norm"]

[Text] Problems closely connected with the correlation of consumption and accumulation are discussed sharply in the economic literature and in mass information media. At the same time, many people, referring to the United States, are convinced that in our country the accumulation norm is excessively high. V. Selyunin believes that accumulation accounts for 40 percent of the country's national income.<sup>1</sup> V. Popov and N. Shmelev: "In recent years we have allocated 24 to 27 percent of the national income for... accumulation... and, if Soviet national income is calculated according to Western methodology, roughly about 20 percent. The United States now spends only 6 percent of the national income on the same purposes..."<sup>2</sup> According to V. Krivosheyev,

the share of consumption in the USSR national income in 1985 comprised 69 percent, whereas in the United States, 89 percent.<sup>3</sup>

Which figures are correct? In fact, is the accumulation norm in our country so big and in the United States, so low? After all, a positive answer to this question directly and unequivocally explains the gap in our countries' consumption levels... Alas, in this case reality is not exhausted by such artless logic.

Our accumulation norm is not so big and the accumulation norm of the United States is not so low. The views presented above concerning one of the key indicators of economic development represent a widespread myth, which has by no means inoffensive consequences.

We will try to show this.

### We Will Compare Structures

First of all, we must analyze the characteristics of construction of corresponding indicators and their components. We apologize in advance to the readers to whom this material will seem boring. Unfortunately, we cannot do without it. Therefore, we must arm ourselves with some patience. On our part we promise to do without unnecessary details and an all-clouding accuracy.

In international practice and in the statistics of the United Nations and capitalist countries accumulation means private gross capital investments intended for the replacement of disused fixed capital and its increase. Expenditures on an increase in fixed capital and in stocks of circulating capital form expanded reproduction resources and characterize pure accumulation, which coincides in content with the concept of accumulation

accepted in the Soviet economy. The magnitude of the accumulation norm changes depending on the accumulation category that is used.

Accumulation figures in the numerator of the accumulation norm. According to Western methodology, the gross national product (GNP) and the gross domestic product (GDP) are used in the denominator of this indicator and in the Soviet Union, national income. For example, our national income used for consumption and accumulation in 1987 totaled 585.8 billion rubles, of which accumulation and other general state expenditures accounted for 143.9 billion rubles. The accumulation norm comprised 24.56 percent of the used national income, including accumulation of fixed productive capital, 9.13 percent, of nonproduction fixed capital, 6.93 percent, and of material circulating capital, reserves, and other expenditures, 8.05 percent. However, in the USSR in 1987 the GNP totaled 825 billion rubles. The share of accumulation within the gross national product was 17.44 percent.

Numerators are also different. In Western countries gross accumulation means "net acquisitions of reproductive material assets (new or second-hand), whose service life is no less than 1 year and which are intended for use for nonmilitary purposes."<sup>4</sup> Accumulation also includes expenditures on improvement in the means of production, land reclamation, expansion of mines, plantations, and orchards, livestock breeding, and so forth. State capital investments and outlays on output for military and technical purposes are not taken into account.

This is sufficient in order to state: The versions concerning a 90-percent or even higher consumption norm in the national product of Western countries, which are widespread in articles by writers on public topics, are groundless. They are not confirmed by the statistics of end GNP use. Let us glance at table 1.

Table 1. Structure of U.S. GNP in 1986-2000, billion dollar, in 1982 prices

Indicators	1986		Forecast until the Year 2000			
	billion dollars	percent	moderate		maximum	
			billion dollars	percent	billion dollars	percent
Gross national product (GNP)	3678.5	100	5161.4	100	5552.4	100
Personal consumption	2428.7	65.8	3429.4	66.4	3659.7	65.9
Gross private capital investments	659.7	17.9	932.1	18.1	1103.2	19.9
Current state expenditures	333.4	9.0	354.4	6.9	371.2	6.7
including:						
—on defense	251.0	6.8	251.0	4.9	263.0	4.7
—of nonmilitary nature	82.4	2.2	103.4	2.0	108.2	1.9
Current expenditures of staffs and local bodies	414.5	11.3	544.0	10.5	586.6	10.2

Compiled according to MONTHLY LABOR REVIEW, No 13, December 1987, p 13. In the GNP and GDP statistics of capitalist countries the correlation of structural elements of accumulation, consumption, and current state expenditures is not always 100 percent. For example, in 1976-1980 the GDP structure in developed capitalist countries was as follows: personal consumption, 60.5 percent, current state expenditures, 16.7 percent, and accumulation, 22.5 percent, the total comprising 99.7 percent, because exports exceeded imports by 0.3 percent points. The GNP differs from the GDP in the balance of profit of foreign capital, wages paid to hired workers of other countries, and profit and wages received by capital and hired workers of a given country in foreign states. In developed countries the difference between the GDP and the GNP is negligible, but in developing countries it makes up quite a noticeable amount.

As can be seen from the table, in the United States in 1986 the norm of accumulation—of private capitalist accumulation alone—comprised 17.9 percent of the GNP. Both consumption and accumulation elements are represented in the current expenditures of the state, states, and local bodies. Consumption includes nonmaterial expenditures on collective consumption and on wages, salaries, and social insurance funds for workers in the sphere of defense and general state administration, whereas accumulation includes capital investments of the federal government, states, and local administration bodies for nonmilitary construction. The expenditures of the federal government on military and technical products and military construction can be unequivocally interpreted neither as consumption nor as accumulation.

Soviet writers on public topics and some economists enter aggregate data on current state expenditures in the consumption fund, for which there is no sufficient basis. UN statistics singles out three main components of the GDP's final use—personal consumption, current state expenditures, and gross private capital investments. With regard to the USSR the overwhelming part of resources similar to current state expenditures is reflected in accumulation. This predetermines the erroneous interpretation of the proportions of consumption in the USSR and the United States.

In the planning system in effect in our country gross capital investments include expenditures on all components of a civil and defense nature. Therefore, our norm of gross capital investments is overstated by the amount of investments in defense measures. Furthermore, nor is the category of gross capital investments in the USSR

comparable with the category of gross investments in the United States with respect to the fact that there they mean pure acquisitions of economic units and already paid for and really received elements of fixed capital, not financial resources.

Prices of consumer and investment goods, as well as inflation rates, have a marked effect on the volumes of gross investments in fixed capital and their share in the GNP. Price factors underestimate the share of the accumulation fund in the United States and other Western countries and overstate it in the USSR.

According to our tentative calculations, the norm of gross capital investments in the USSR GNP in 1989 will comprise approximately 23 percent, which is close to the average values of indicators of gross private accumulation in developed capitalist countries. In reality, however, the norm of gross accumulation in the USSR, which is comparable with the structure of private capital formation, will be smaller than in Western countries, in particular, 1.5- to 2.5-fold in the accumulation of basic productive capital—this decisive element in expanded reproduction.

The Program of International Comparisons of the GDP in Europe (1980) conducted by the UN gave the most reliable information on the accumulation norm in a number of socialist and capitalist countries according to comparable methodology. Essentially, for the first time in statistical practice it identified both the amount of the national product and evaluations of its basic components reduced to the parity of the purchasing power of the Austrian schilling (Table 2).

**Table 2. Correlation of Basic GDP Components in 1980, percent of the total**

	Austria	Finland	Hungary	Poland	Yugoslavia
GDP in national currency	100	100	100	100	100
including:					
—personal consumption	68.7	63.9	61.4	68.6	59.5
—collective consumption	8.6	9.9	8.1	8.9	10.6
—capital investments	22.7	26.2	30.5	22.3	29.9
GDP according to parities of the purchasing power (Austrian schillings)	100	100	100	100	100
including:					
—personal consumption	67.5	62.1	62.8	63.1	62.5
collective consumption	8.3	8.0	7.8	10.5	10.2
capital investments	24.2	29.9	29.4	26.4	27.3

See: Mezhdunarodnoye sopostavleniye valovogo vnutrennego produkta v Yevrope [International Comparison of the Gross Domestic Product in Europe], 1980, UN, 1985, p 146.

Two important factors are noteworthy in this table. The share of the consumption fund (private and collective) has nothing in common with 90 percent and of the accumulation fund, with 6 to 10 percent and proportions of gross accumulation in five countries proved to be approximately the same, which amazed

European statisticians. Apparently, stereotypes of the overstated share of accumulation in socialist countries are not only our national property. A mutual conversion of the accumulation norm according to Western and Soviet methodology shows the ambiguity of indicators, owing to the big differences in the structure of

Rumania, 989 kg in Czechoslovakia, 613 kg in the FRG, and 806 kg in Japan. True, Soviet indicators are much higher than in the United States, Italy, and Great Britain, but the production of plastics and other metal substitutes is developed there. The quality of metal in the USSR is low and the expenditure of raw materials and power on its production is excessive. What does our indisputable superiority in terms of gross output cost us?

In the opinion of Japanese economists K. Yenaki and T. Morimoto, the use in their country of technologies of continuous steel casting, natural gas blowing, and dry coke quenching gives a tremendous advantage and serves as the main reason for power saving at metallurgical plants. According to their calculations, "the Soviet Union would not need the power of all nuclear stations if power saving technological systems similar to the Japanese ones were established in the steel smelting industry."<sup>12</sup> The last words can be replaced with good reason with the words "similar to the Soviet ones," because precisely Soviet technologies used in Japan brought this country a vast economic and ecological effect. Lulling ourselves with impressive figures on metal output, we lost time for the reconstruction of the metallurgical complex. In the UkrSSR alone the wear of metallurgical equipment makes up 70 percent. Throughout the country 25 percent of the blast furnaces and 40 percent of the open-hearth furnaces and rolling mills have functioned for more than 40 years. In metallurgy, the pulp and paper industry, and some other sectors most enterprises were built at the end of the last and the beginning of the present century. The lack of production accumulation in the metallurgical industry brought about much bigger capital investments in related sectors, primarily in fuel and power ones.

Net accumulation is regulated by the volumes of commissioning and completed major repairs of fixed capital minus the wear and withdrawal of capital owing to dilapidation. In 1970-1987 the accumulation process became degraded and acquired a deformed nature. The following example attests to this: In 1987 gross accumulation in the Ukrainian SSR was approximately equal to the gross accumulation of the USSR in 1959. At the same time, however, the excess of the commissioning of capital over wear totaled 15.2 billion rubles, as compared with 3.77 billion rubles in the Ukraine in 1987, and in productive capital, 9.3 billion rubles as compared with 1 billion rubles. Thus, with the same amounts of gross accumulation net production accumulation was ninefold smaller in the republic. In 1987 net production accumulation in the United States was five- to sixfold higher.

Capital investments in production accumulation projects in the UkrSSR (1987) per worker in material production totaled 1,072 rubles, as compared with 1,468 rubles throughout the country, 1,697 rubles in the RSFSR, and 1,613 rubles in Kazakhstan.<sup>13</sup>

Yu. D. Maslyukov, chairman of the USSR Gosplan, noted: "Intensification in the social orientation of the economy is based on major structural shifts. First of all,

this concerns the fundamental proportion between consumption and accumulation. During the preparation of the draft plan for 1989 the methodological study of this question intensified significantly and a weighed approach to various elements in the accumulation of national income very dissimilar in their purpose was used. Thus, accumulation in fixed nonproductive capital ensuring the development of the social sphere is to be increased at outstripping rates. A buildup in truly new, advanced equipment will predominate in the accumulation of fixed productive capital. A reduction in incomplete construction and production stocks with an increase in the resources of goods in trade is envisaged."<sup>14</sup> In 1987 the increase in fixed capital totaled 94.1 billion rubles, whereas stocks of material circulating capital decreased by 1 billion rubles.<sup>15</sup> Net accumulation was expressed in the amount of 93.1 billion rubles, which was equal to 15.89 percent of the national income and 11.28 percent of the GNP of the USSR.

Net private capitalist accumulation in the United States in 1987, which we calculated according to Soviet methodology, comprised 8.75 [percent] of the GNP.<sup>16</sup> Its norm does not include accumulation from state sources, because it is very complicated to determine it strictly. On the whole, the net accumulation norm in the USSR appears higher. However, in accumulation in the USSR part of the resources are obtained at the expense of major repairs financed from depreciation, whereas in the United States the consumption of fixed capital is ruled out completely. For example, in the UkrSSR the overwhelming part of the increase in fixed productive capital is attained at the expense of major repairs. Throughout the country repair costs total 80 billion rubles annually. Without taking major repairs into account, the net accumulation norm in the USSR will not exceed 6.5 percent of the GNP and will be approximately one-half of the share of private and state accumulation in the United States.

All the above-presented information on accumulation in the USSR belongs to the nominal variant calculated in current prices. Meanwhile, it is generally accepted that prices of investment goods significantly outstrip the changes in their use value and exceed the increase in capital in physical terms. Therefore, real accumulation in the USSR is much lower than the calculated levels obtained by us. In G. M. Sorokin's opinion, in the USSR real accumulation is one-half of the nominal one.<sup>17</sup> From the calculations of the Institute of Economics of the UkrSSR Academy of Sciences concerning accumulation in the country's agriculture it follows that in 1965-1986, while the balance value of fixed productive capital and material circulating capital on kolkhozes and sovkhozes increased more than fivefold, the index of the physical volume of production resources (feed, seeds, petroleum products, and fertilizers) increased only twofold and of the active part of the capital, 2.11-fold. Real accumulation did not exceed 40 percent of the nominal accumulation.

### Love for the Grandiose

In a number of old industrial regions net production accumulation is not only unable to ensure an increase in capacities, but also, in essence, to hinder a spontaneous self-destruction of productive forces. To a decisive degree this is predetermined by the fact that basic net accumulation resources were barbarically plundered by the construction projects of the century, river inversion, and spanning of the Kara-Bogaz, the Danube, and so forth. Many writers on public topics openly accuse the socialist management system and command-order methods of the Stalin regime of this.

We assume that socialism as a social system cannot and should not be identified with Stalinism. Conversely, what was introduced by Stalin is organically alien to socialism. In the 1970's-1980's, when the rate of development of the socialist economy was lost, the same Stalinist methods—not in the form of a tragedy, but of a farce—predominated in the country's management. The big body of officials corrupted by super-high income even under Stalin degenerated into a feudal-like stratum. It created in the country an atmosphere of universal money grubbing and put at the head of the list a senseless and blind personal enrichment medieval in its essence, not the people's interests. Are the destructive and scornful attitude toward the objective laws of reproduction and the fantastic squandering of accumulation resources surprising against this background? An avalanche of "grandiose" projects rolled throughout the country, while the national economy grew sickly, equipment became obsolete, and technical progress ossified and degenerated.

Under the effect of all this economic confusion created to counterbalance the preference for the future over the present, which prevailed in our country for many years, a negative attitude toward accumulation, as something alien and unnatural, was formed. Meanwhile, accumulation was and remains a permanent basis for any economic, political, and mental progress and a decisive condition for the well-being, balance, and normal development of society.

The groundlessness of the appeals for a further limitation of the accumulation norm contradicts the goals of social policy. A total of 60 percent of the presently commissioned construction projects are aimed at an increase in the capacities of enterprises of the consumer sector, processing and transportation of food products, and environmental protection, 31 percent, at the output of the means of production, and 9 percent, at strengthening the material and technical base of science and intersectorial scientific and technical complexes.<sup>18</sup> The first results of cooperation between Soviet enterprises and foreign firms in sewing, footwear, and other sectors show, as was to be expected, that a sharp leap in the increase in the output and improvement in the quality of consumer goods is not attained by decrees, no matter how many there might be, but by deliveries of technological equipment. True, under conditions of the state

debt, the budget deficit, and the commodity famine the state should limit its expenditures. Does it have reserves not connected with the curtailment of production accumulation? It seems that there are such reserves.

This includes the begun restructuring of 300 enterprises, conversion at military plants, and reduction in expenditures on defense.

From the data on the number of armed forces and on the quantity of arms of the Warsaw Treaty Organization it is clear that the USSR accounted for the lion's share in the production of basic types of weapons. According to the American version, the USSR spends on defense no less funds than the United States.<sup>19</sup> This includes a reduction in capital investments in projects with a long period of recovery and their use for investments in fixed productive capital, whose recovery is 3.2 years, as compared with 9.9 years of the recovery of accumulation as a whole.

Democratic control over the use of accumulation resources is necessary. There is an urgent need for a reform in the entire investment activity, including methods of planning accumulation and its cost-accounting organization, major repairs, and depreciation policy. The Soviet Union has at its disposal real opportunities to carry out accumulation efficiently and to advance on the path of scientific-technical and social progress.

### Editor's Comments

It seems that the prepared reader will read B. Ye. Kvasnyuk's article without difficulty. However, a great deal of what is self-evident to the specialist will require efforts on the part of economists, whose interests lie in other areas. What is there to say about representatives of other specialties, who constitute the majority of our readers! Therefore, anticipating possible questions, we will try to answer some of them.

In a purely formal manner the term "accumulation" has the most general meaning. This is an expansion of and an increase in stocked wealth. Both the means of production and consumer goods and money can be accumulated. On the whole, people talk about the accumulation of property and differentiate production and nonproduction accumulation. The words "footwear accumulation" are found in B. Ye. Kvasnyuk's article. This precisely is the element of so-called nonproduction accumulation. The obvious meaning of accumulation of consumer goods lies in an indirect increase and qualitative improvement in consumption. It is one thing when, for example, a person has two pairs of shoes annually and another, when he has as many pairs as necessary in order not to be in need of footwear and to wear fashionable shoes, according to the season, and so forth. However, in order to change over from a state of shortage to a state of saturation, there is a need for an accumulation and an increase in stocks, in this case, in shoes. Accumulation stops when the increase in stocks stops.

In popular speech accumulation means savings of money. Although they can be aimed at an increase in consumption in the future, savings can also have other causes, for example, a lag of supply behind demand, or an imbalance in both, as the shortage of necessary goods, while the population has funds for their purchase, is often called now. B. Ye. Kvasnyuk's article discusses the differences in recording in U.S. statistics, where "net purchases... and really received elements of fixed capital" are taken into account, and in our country, where the orientation is only toward a monetary evaluation, which, obviously, distorts the true picture of the state of affairs.

Production accumulation does not signify an indirect increase in consumption or its indirect qualitative improvement. Perhaps, therefore, many people are suspicious of production accumulation and perceive it as a direct deduction from national income. One could agree with this if one did not have to think about the future. But any, the least bit thoughtful, peasant, who divided the grain harvest into what would be eaten and what would be used for sowing for the next harvest, was forced to rack his brains over this. If he was satisfied with simple reproduction, that is, a repetition of production on a previous scale, he did not need an increase (accumulation) in the seed stock. However, production expansion required an increase in the quantity of grain for sowing diverted from consumption.

A situation similar in principle, but with due regard for a totally different scale, a different complexity, and the existence of a ramified structure, in which every element plays its role, all elements together representing a grandiose play called national economic reproduction, exists in the national economy as a whole. It is not enough to talk merely about a high or low accumulation norm. It is not a matter of the norm in itself, but of whether consumption grows rapidly or slowly. As the saying goes, it doesn't matter if guns don't fire, as long as ducks fall from the sky. However, since everything—whether ducks fall or not—will depend on the good condition of the guns, it is necessary to see this connection.

Let us compare two hypothetical situations. Let us assume that with an accumulation norm of 25 percent (of the national income) the average annual rate of increase in consumption will comprise 10 percent. In the other situation—with an accumulation norm of 10 percent—the rate of economic growth makes up 4 percent. Arithmetics is such that in the first case consumption will double every 7 or 8 years, whereas in the second, only every 17 or 18 years. However, in the first variant the first 3 years will have relative (as compared with the second) losses in the consumption level and net gain will begin only from the fourth year. Which of these variants is better? The choice between them depends on the preference for the present over the future prevailing in society.

However, if the accumulation norm is established at 35 percent and the rate of growth of the national income is

only 12 percent, the attainment of net gain will be postponed so much that this entire variant will hardly be of interest.

Furthermore, the increase in the accumulation norm in excess of a certain level by no means always leads to an increase in the rate of growth of national income. In the example with the peasant the increase in the seed stock, without a change in the area of cultivated land and its cultivation technology, will have his family's "belt tightening" not only today as a quite probable result.

These simple situations show that the determination of the accumulation norm is a kind of optimization problem. The relationship, which is unknown to us in advance, between the accumulation norm and the rate of growth of national income (which is the result of the future activity of the entire society), the preference for the present over the future prevailing in society, and its many, many other unknown conditions participate in its formulation.

In other words, when this problem is formulated, numerous questions must be solved: Are there such effective technologies, whose use will ensure the desired growth of consumption with a given norm of production accumulation? Do the necessary prerequisites (of different kinds) for a mass use of these technologies exist? With a negative answer to these questions production accumulation (at the planned level), obviously, is devoid of any meaning. We have something similar when we allocate capital investments for "projects of the century" doubtful from the economic point of view, or when we continue to expand the production of products not in demand. The psychological trap, which, in particular, makes appeals to lower the accumulation norm understandable, lies here.

B. Ye. Kvasnyuk's article shows how the indicator of the accumulation norm in itself is not simple. Handling it requires caution, which we by no means always find in numerous present publications on this subject. However, mastering it is only the first step on the path toward understanding the very complex connection between accumulation and consumption, which has become greatly strained during the years of restructuring. The journal hopes to turn to it in its next issues.

#### Footnotes

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8. See: "Statistical Abstracts of the United States," 1987, p 843.
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16. Calculated according to "Ekonomicheskoye polozheniye kapitalisticheskikh i razvivayushchikhsya stran" [Economic Situation of Capitalist and Developing Countries], Moscow, Pravda, 1988, p 102; SURVEY OF CURRENT BUSINESS, No 12, December, 1987, p 3.
17. See: Sorokin, G. M., "Rates of Growth of the Soviet Economy," VOPROSY EKONOMIKI, No 2, 1986, pp 18 and 20.
18. See: Vid, L. B., "Quality of Rates of Growth," EKONOMICHESKAYA GAZETA, No 36, p 4.
19. See: "Statistical Abstracts of the United States," 1986, p 843.

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## AGRO-ECONOMICS, POLICY, ORGANIZATION

### New State Food, Procurements Commission Structure Outlined

18240253 Moscow *VESTNIK AGROPROMA* in  
Russian No 35, 25 Aug 89 p 2

[Unsigned article: "State Commission for Food and  
Procurement Goes to Work"]

[Text] Reasons for Improvement of Management of the  
APK

The course developed at the March (1989) Plenum of the CPSU Central Committee of consistent broadening of the rights of the union republics, of placing on them the full weight of responsibility for supplying food to the population predetermined the radical restructuring of management in the country's agroindustrial complex. We are referring above all to delineation of the respective functions and powers at all levels of management. The USSR laws on the state enterprise (association) and on the cooperative, along with the principles of full cost accounting (*khozyaystvennyy raschet*) and self-financing, were made the basis of this.

Further democratization of economic activity, elimination of excessive rulemaking in the operation of agroindustrial enterprises, kolkhozes, and sovkhozes, and enhancement of their accountability for the end results also became a determining factor of the APK's new management structure. The problem of clear delimitation of the functions of the state administration and economic administration of all enterprises and of flexible combination of the state principle and the voluntary principle, also arose with full force.

Reality has set the task of radically changing the system for management of agroindustrial production on the scale of the rayon, oblast, kray, and autonomous republic by forming bodies for economic self-management on voluntary principles with functions delegated to them by the basic production units and agroindustrial formations.

#### Basic Goals of Restructuring the APK's Management

As management of the country's agrocomplex is restructured, it has been set down that at the level of the basic production unit it is important to guarantee development of diverse forms of economic activity and to flexibly combine the various forms of ownership.

At the level of the administrative rayon, plans call for consistent transformation of rayon agroindustrial associations from entities representing state administration into cost-accounting formations and for broad dissemination of the new organizational forms of agroindustrial integration and cooperation—agroindustrial associations, agrocombines, production associations (*obyedineniya*), associations (*assotsiatsii*), and other formations created on a voluntary basis.

On the scale of the autonomous republic, kray, and oblast, instead of the entities that now exist, there will be elective bodies for economic self-management—councils of agroindustrial formations. Their activity is to be directed toward performance of functions delegated to them by the cost-accounting associations, by organizations of lessees, by cooperatives of leasing collectives, and by peasant farms. As for the republic agroindustrial complexes, in connection with the transition of that administrative division to the principle of self-management and self-financing, once again the plans here call for further improvement of the organizational structure.

#### Composition of the State Commission of the USSR Council of Ministers for Food and Procurement

The makeup of the state commission will include two first deputy chairmen and four deputies, who will take charge of such structural subdivisions as the Main Scientific-Technical Administration, the Main Administration for Foreign Economic Relations, the Department for Multiannual Development of the Food Processing Industry and Fishing, and the Department for Economic Analysis and Intersector Proportions. The commission will also include representatives from a number of ministries and departments and specifically the Ministries of Automotive and Agricultural Machinebuilding, Fishing, Water Management Construction, the USSR State Committee for Forestry, USSR Gosplan and Gossnab, the Ministry of Finance, the USSR State Committee for Labor and Social Problems, and USSR Goskomstat. The members of the commission include the president of VASKhNIL, the chairman of the Union Kolkhoz Council, and the chairman of the Tsentrosoyuz Board.

#### The Tasks of the State Commission

Jointly with other state administrative entities the state commission forms all-union food stocks and state reserves and administers centralized distribution of the most important foodstuffs and agricultural raw materials. The new administrative entity exercises day-to-day oversight over deliveries of foodstuffs and raw materials and over their optimum use, and it works out economic principles for organizing product purchases.

Among the state commission's most important tasks are the comprehensive analysis of the economic activity of the agroindustrial complex as a unified whole, defining a general strategy on that basis for further development of agriculture and its related branches, as well as preparation of major state programs for augmenting food resources so as to take into account broad application of advances of science and technology to production.

Implementing social welfare policy in rural areas is a priority line of activity of the state commission. Among

the major problems to be solved are the drafting and performance of measures to improve methods of economic activity, regulation of economic relations both within the agrocomplex itself and also with other national economic complexes. The commission is called upon to monitor the equivalence of exchange between sectors and price parities between agricultural products and the material and technical resources delivered to it.

There will also be important tasks with respect to conducting a uniform policy in the area of land use and land use planning and the management of the veterinary, quarantine, and other services of the entire state.

The state commission drafts investment policy and provides guidance as to scientific matters and methods in the design of the APK's projects, distributes water resources among regions, and monitors their use. One of the functions will be to develop scientific-technical and economic cooperation with foreign countries on the basis of broad use of its new forms.

#### **Organizations Being Created in Conjunction With the State Commission**

A number of organizations are being created in conjunction with the state commission in order to perform the tasks placed on the State Commission of the USSR Council of Ministers for Food and Purchases. They will include 9 main administrations and a number of other subdivisions with a total labor force of 901 persons.

#### **Alteration of the Functions of the Country's Central Economic Bodies**

Because USSR Gosagroprom is being abolished, some of its functions are being transferred to other entities. For instance, USSR Gosplan is now drafting the initial planning indicators and in agreement with the State Commission of the USSR Council of Ministers for Food and Purchases is submitting them to councils of ministers of union republics and USSR ministries and departments which are part of the agroindustrial complex. In addition, Gosplan, with the help of councils of ministers of union republics and consent of the State Commission, draws up proposals for the volume of deliveries of food

and agricultural raw materials to the all-union stock, and it works out draft versions of balances and plans for their distribution.

The Ministry of Finance works out the initial data and rates for payments to be made into the budget and appropriations to be made from it. This ministry, jointly with the councils of ministers of union republics, is called upon to conduct a vigorous policy toward a radical rise in the efficiency of the resources invested, toward a strengthening of the thrift regime, and toward restoration to health of the financial condition of the APK's enterprises and organizations, as well as providing guidance as to methods on aspects of their financial activity.

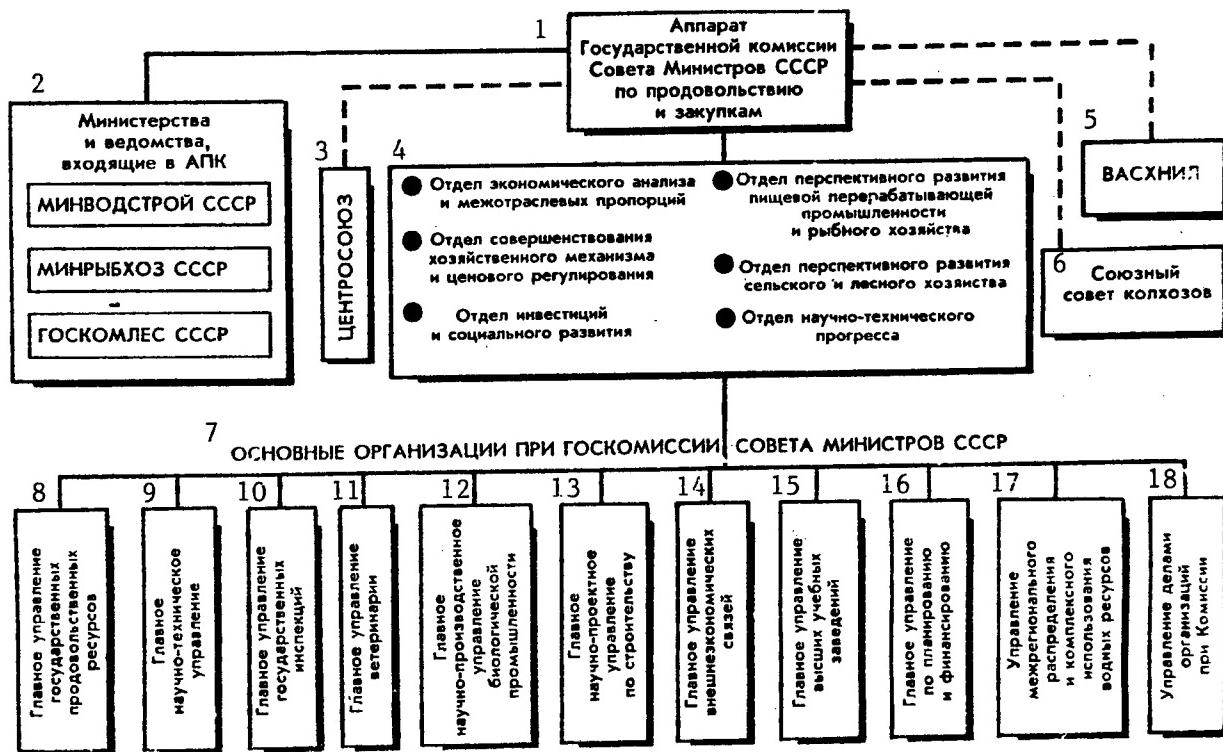
The functions of USSR Goskomstat are undergoing revision. It is being given responsibility for providing a uniform methodology for bookkeeping and reporting, analysis, and the economic and financial activity of enterprises and organizations in the APK.

The USSR State Committee for Prices drafts proposals for purchase prices of agricultural products and raw materials and also prepares draft proposals for wholesale and retail prices of foodstuffs that are set centrally. It is also expected to guarantee the parity of purchase prices and wholesale prices.

The USSR State Committee for Labor and Social Problems is being given responsibility for summarizing experience and preparing recommendations on problems of applying the progressive organizational forms and progressive forms of remuneration in kolkhozes and sovkhozes, manufacturing enterprises and other enterprises of the APK. An administration for organizational matters and remuneration in the agroindustrial complex will be created within the central staff headquarters of this department.

The full weight of responsibility for organizing the supply of physical resources and for guaranteeing the completeness of equipment and materials for projects in the agroindustrial complex and also leasing organizations, cooperatives of leasing collectives, and peasant farms is being placed on USSR Gossnab, councils of ministers of union republics and their local entities. To that end, the Main Administration for Material and Technical Supply of the APK of the former USSR Gosagroprom is being transferred to the central staff headquarters of USSR Gossnab.

Structure of the State Commission of the USSR Council of Ministers for Food and Purchases



Key:

1. Staff headquarters of the State Commission of the USSR Council of Ministers for Food and Purchases
2. Ministries and departments which are part of the APK; USSR Minvodstroy; USSR Minrybkhоз; USSR Goskomles
3. Tsentrrosoyuz
4. Department for Economic Analysis and Intersector Proportions; Department for Improvement of the Economic Mechanism and Price Regulation; Department for Investments and Social Development; Department for Multiannual Development of the Food Manufacturing Industry and Fishing; Department for Multiannual Development of Agriculture and Forestry; Department for Scientific-Technical Progress
5. VASKhNIL
6. Union Kolkhoz Council
7. Principal organizations in conjunction with the state commission of the USSR Council of Ministers
8. Main Administration of State Food Resources
9. Main Scientific-Technical Administration
10. Main Administration of State Inspectorates
11. Main Administration of Veterinary Science
12. Main Scientific-Production Administration of the Biological Industry
13. Main Scientific and Design Administration for Construction
14. Main Administration for Foreign Economic Relations
15. Main Administration for Higher Educational Institutions
16. Main Administration for Planning and Finance
17. Administration for Interregional Distribution and Combined Use of Water Resources
18. Administration of the Affairs of Organizations Associated With the Commission.

**Leasing in Tatar ASSR and Uzbekistan****Uzbek SSR Experience**

*18240157 Tashkent SELSKOYE KHOZYAYSTVO UZBEKISTANA in Russian No 2, Feb 89 pp 33-36*

[Article by Ch. Ruzmatov, chief of the Section for Labor Problems in the APK of the Uzbek Branch of the Scientific-Research Institute for Labor, USSR State Committee for Labor, candidate of Economics Sciences: "Lease Contract: Essence, Experience, Problems"]

[Text] Successful solution of urgent problems of the agroindustrial complex requires, from each workers' collective and its members, a search for and practical application of everything new and progressive which promotes a prompt increase of production, activation of the role of the human factor in the rational and effective use of existing production reserves. One of the most important ways of achieving this is the widespread use of the lease contract in agriculture. This is the best way to increase food reserves of the country.

As a completely new form of economic inter-relationships between the farm administration and the leaseholder in the form of a production brigade, a team, an independent family or an individual worker, the lease contract promotes an increase of the economic interest of the worker (leaseholder) in the increase of production of high-quality and inexpensive food products and raw material for the processing industry and increases the sense of pride of the landholder and other means of production which have been leased. Only economic relationships connect the leaseholder with the farm from which he received the land.

Some farms in most republics of the country already operate on a lease form of organization of production and labor incentive.

Virgin cotton-growing sovkhozes imeni 50th Anniversary of the October Revolution of Dustlikskiy and "Uzbekistan" of Mirzachulskiy regions of Syrdarinskaya Oblast have begun to introduce the lease contract in Uzbekistan.

In this article, the author attempts to summarize results of use of lease relationships on the sovkhoz imeni 50th Anniversary of the October Revolution, with which the Uzbek branch of the Scientific Research Institute of Labor has close connections and to show problems and deficiencies in this new arrangement and to point out means of their practical solution and elimination.

The farm began to operate under the new conditions, on a lease contract with the use of a salary system on profit and loss (gross) income of a lease subdivisions and

arbitrary monetary nominals, checks for calculating production economic-financial expenditures in 1987. At present, there are 139 independent teams (including individual families) in horticulture and 8 teams in animal husbandry working on a lease contract. Leaseholders are working 83.7 percent of the arable land and tending 64.6 percent of the cattle on the farm. The leaseholders produce 83 percent of the horticulture production and 89 percent of the animal husbandry production.

Some organizational and preparatory work preceded introduction of the lease contract at the sovkhoz. In particular, 8 departments and 41 brigades were abolished with a savings of salary of 74,000 rubles. The farm land was divided into 3 zones depending upon fertility, condition of the drainage system and distance from the center of the sovkhoz.

The economic relationships between the farm administration and the lease profit and loss accounting subdivisions and between the lease subdivisions themselves are regulated by contracts confirmed by the board of directors of the sovkhoz and agreed to by the trade union committee and also by the conditions of organization of the lease in accordance with recommendations worked out at the farm.

Norms of production expenditures for 1 hectare of cotton planted and calculated prices for 1 hectare of cotton of the proper assortment are differentiated according to the three indicated zones. Norms of production expenditures per hectare of cotton for the zones are: 995 rubles and 59 kopecks for zone 1, 1020 rubles and 40 kopecks for zone 2 and 1045 rubles and 73 kopecks for zone 3. Calculated prices per centner of cotton for the zones are presented in table 1.

Calculated prices for each lease subdivision are determined with consideration of the cost of all necessary resources, depreciation deductions and wages. The difference between purchase prices and calculated prices is the lease payment per unit of production.

In order to simplify calculations, arbitrary money nominals (checks worth "1", "3", "5", "10", "25", "50" and "100") are being developed and introduced by the farm. These checks are used to produce mutual accounts between the administration (accounts office) of the sovkhoz and the lease profit and loss accounting subdivisions, between the subdivisions themselves and between the lease subdivisions and the subdivisions providing natural resources, work performed, services rendered and others. Checks are written for the total sum of limits, allocated for salary and direct economic expenditures of the lease contract collective. At the end of the year, unused, that is the saved limited checks, are returned to the sovkhoz accounts office and the collectives of leaseholders receive actual money instead.

Table 1: Calculated Prices for 1 Centner of Cotton, Rubles, Kopecks

Zones	1st variety	2d Variety	3d variety	4th variety	Average
1st zone	47-12	40-62	34-12	20-08	37-05
2d zone	48-08	41-45	34-82	20-43	37-80
3d zone	49-91	43-02	36-14	21-65	29-23
Average for the farm	48-45	41-76	35-07	20-75	38-11

Results of operation under the new conditions of management show the high effectiveness of the lease profit and loss accounting contract. In 1987, the first year of the experiment and a year of extremely unfavorable weather conditions, the sovkhoz obtained more than 2.3 million rubles of profit. Profitability of the farm was 28.5 percent against 4 percent in 1986. Significant improvements were

made in the basic sector of production-cotton growing. The cotton yield in the past year actually was 29.5 centners per hectare with the plan calling for 26.9 centners per hectare; profitability of the sector was 40.4 percent in contrast to 37.7 percent in 1987. First and foremost, the anti-expenditure mechanism began to function harmoniously. Data concerning reduction of the amount of industrial expenditures (table 2) confirm this convincingly.

Table 2

Kinds of expenditures	Actual expenditures for 8 months of 1987	1988			Deviations (+ or -)		
		Plan for the year	Plan for 8 months	Actual for 8 months	For 1987	For 1988 annual plan	For the 8-month plan
Total expenditure	5629	8377	5798	5317.0	-312.0	-3060.0	-481.0
Including:							
Wages	1761	3126	1876	1587.8	-173.2	-1538.2	-288.2
Seeds	268	222	222	237.9	-30.1	+15.9	+15.9
GSM	141	181.7	127.4	121.1	-19.9	-60.6	-6.3
Fertilizers and chemicals	508	702	491	463.2	-44.8	-238.8	-27.8
Depreciation of fixed assets	829	1470	888	726.5	-102.5	-743.5	-161.5
Transportation services	386	607	385	349.0	-37.0	-258.0	-36.0
Fodder	246	338	237	234.0	-12.0	-104.0	-3.0
Other expenditures	149	1730.3	1571.6	1597.5	+107.5	-132.8	+25.9

Transition of industrial subdivisions to a lease contract provided significant savings of material and money. The fact is that this is advantageous to the farm and to the members of lease collectives. Expenditures on hiring extra help in the busiest periods of farming were reduced significantly.

The effect of the anti-expenditure mechanism is seen in the decrease in labor and funds for processing 1 hectare of crops or care of 1 head of cattle and, consequently, its effect on reduction of the cost of 1 unit of production. For example, expenditures on production in the first half of 1988, in comparison with the corresponding period of 1987, (calculated per hectare of crops or per head of cattle) were reduced: by 85 rubles for cotton production, by 192 rubles for grain production, by 118 rubles for vegetable production, by 30 rubles for the care of cattle and by 7 rubles for the care of swine. Cost of 1 centner of milk in the period compared was reduced by 3 rubles, 22 kopecks and cost of fattening cattle was reduced by 31 rubles, 54 kopecks.

At the same time, we must point out that the conditions of organization of the lease contract existing in the sovkhoz still require further improvement; not everything here is organized properly. This is indicated by the fact that, in some positions, especially in animal husbandry sectors, results achieved are not too satisfactory. Thus, in the first half of last year, animal husbandry production decreased in comparison with production in the same period of 1987: weight gains decreased by 4.6 tons, including 3.7 tons for cattle, 0.4 of a ton for swine and 0.3 of a ton for fowl. Productivity of the cattle decreased: milk yield from 1 forage cow decreased by 129 kg; mean daily weight gain decreased by 64 g for cattle and by 38.8 g for swine. In contrast to this, labor expenditures increased: by 2.7 man hours for 1 centner of weight gain of cattle and by 180 man hours for 1 centner of weight gain of swine. Expenditures on some forms of horticultural production (per hectare of sowings) increased in the period compared: by 998 rubles for potatoes, by 208 rubles for melons and by 97 rubles for fodder crops. The rates of growth of labor productivity

were inadequate. Production calculated per worker increased only by 7.6 percent or by 19 rubles for the period compared.

Further development of the lease contract on kolkhozes and sovkhozes of the republic and an increase of its effectiveness require solution of some organizational and economic problems by economic science and agricultural practice. The most important of these problems is the absence of a complex approach to the development of the lease contract. At present, mainly horticultural sectors are being transferred to the lease contract while animal husbandry is being transferred only selectively. Such a situation is to be explained, basically, first by the difficulty of solving problems concerning fodder production under leasing conditions and second by the low efficiency of most animal husbandry sectors, especially on virgin-land farms. There is a definite conflict between the advisability of wide-scale development of lease contracts in animal husbandry and the possibility of its realization. Development of a lease contract, as a rule, assumes its realization in close combination with a system of payment from gross income. The scantiness and, in some cases, the complete absence of net income (profit) in the structure of gross income in some sectors place some limitation on the possibilities of effective development of a lease contract in animal husbandry. There is, in our opinion, a way out of the developing situation.

First of all, evidently, there is an objective necessity for further improvement of prices for animal husbandry production. We must also consider (under conditions of the effect of present prices) other most rational and effective systems of organization of wages in animal husbandry sectors under conditions of development of lease contracts.

The complexity of introducing the lease contract into agriculture is disrupted also by the fact that all basic links of technical-production servicing of basic production (TsRM, truck transportation, storage and processing production, construction shops, materials and technical supply, administrative service and scientific and technical support, social and domestic service and others) all still remain beyond the bounds of leasing relationships. Development of the lease contract and increase of its effectiveness require scientific development of practical questions of wide-scale involvement of the service spheres in active leasing relationships.

Economic principles of organization of the lease contract are still very weakly developed. First, there must be scientific substantiation of principles of price formation for the natural resources required by the leaseholders and for the production produced and work and services performed by them; optimum amounts of these prices for individual zones of the republic; more rational forms of methods of payment for leased land, cattle, equipment and other basic means of production. Therefore, it is necessary to use either an appropriate lease payment calculated per hectare of sown land, head of cattle etc., or

to compensate this lease payment at the expense of existing differences between purchase prices and calculated prices. These 2 versions of lease payment conditions are subject to thorough study and substantiation.

Scientific solution of these problems and aspects of them requires scientific reconsideration and substantiation of economic conditions of development and functioning (i.e., conditions of simple and expanded reproduction) of both the farm itself as a whole and its lease subdivisions.

Features of development of lease relationships in the Soviet village require radical reexamination of the principles of organization of wages and economic incentive of leaseholder workers.

Development of collective, family, individual and lease contracts also requires scientific development of principles of administration of kolkhoz and sovkhuz production, more precise definition of the rights and functions of each link of the administrative structure: administration of the farm, its subdivisions and shops, leaseholder collectives, families and individual leaseholders.

This is an incomplete list of basic problems which are on today's agenda. The speed and scientific efficiency with which these problems will be solved depends greatly on the increase of economic effectiveness of the agrarian sector of the agroindustrial complex of the country.

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### Tatar ASSR Situation

18240157 Saratov STEPNEYE PROSTORY in Russian  
No 2 Feb 89 pp 19-20

[Interview with G.M. Nabiullin, Deputy Chairman of the Tatar ASSR State Agroindustry, conducted by STEPNEYE PROSTORY correspondent N. Khabarova: "Mutual Interests"]

[Text] *How can we ensure an adequate supply of basic food products on the shelves of shops and on the tables of townsmen and rural inhabitants? G. M. Nabiullin, Deputy Chairman of the Tatar ASSR State Agroindustry, explained this in an interview with STEPNEYE PROSTORY correspondent N. Khabarova.*

[Khabarova]: Gabdulkhak Mirziyevich, what is the State Agroindustry of the republic doing to create a firm base for improving nutrition of the people?

[Nabiullin]: Everyone already knows that such a base is being created by introduction of a new economic mechanism. But profit and loss accounting and self-financing

can give a high return only under conditions of general mastery of progressive forms of administration and of a collective, lease, family or individual contract.

Plans of development of the economy under new conditions, long-term standards, profit distribution procedures, differentiated increases of purchase prices for farm production sold to the state by kolkhozes and sovkhozes are being developed in the republic. There are prospects for improving the administrative structure. Profit and loss accounting teaches how to use the anti-expenditure mechanism more widely and how to develop different kinds of leases.

[Khabarova]: How do you feel personally about a lease contract?

[Nabiullin]: I think that precisely this mechanism of organization of production is a potent anti-expenditure mechanism; it intertwines the personal, collective and state interests more solidly. In my opinion, this is the simplest and most lucid form of organization of labor for complete profit and loss accounting.

[Khabarova]: Is it being incorporated into animal husbandry?

[Nabiullin]: The year before last, on "Kama" Kolkhoz of Mendeleyev Rayon, the Gabdulkh Nabiullin family became the first leaseholder. They received 20 hectares of land, a rebuilt tractor and a horse and they built a shed. After fattening 50 leased calves, they found that profitability was 62 percent. You will agree that this is very good. At the beginning of last year, two other groups were created. Minnarais Khusnutdinov's group raised 80 head of young cattle; Vladimir Malkov's group raised 50 head. On "Raduga" Sovkhoz in Yelabuzhskiy Rayon, Galina Semenovna Trofimova and her husband leased 70 bulls. Incidentally, they entered the sovkhoz not so long ago from Naberezhnyy Chelny. What they knew about agriculture came from newspapers and films. But, here is the result of their work: the mean daily weight gain of their stock was higher than that of the sovkhoz stock by 230 g; expenditures per centner of weight gain was 2.5 times lower and fodder expenditure was 2 times less.

[Khabarova]: Is there a farm in the republic where the lease contract is introduced in all subdivisions?

[Nabiullin]: Do you want specific names? The sovkhoz "Rassvet" of October rayon, the kolkhoz imeni Bekhterev Yelabuzhskiy and many farms in Apostovskiy, Aktanyshkiy, Almetevskiy, Zainskiy, Leninogorskiy and other rayons. We are publicizing their experience widely.

[Khabarova]: Recently people have become more willing to raise cattle on an individual contract on personal subsidiary farms. What does this do under self-financing conditions?

[Nabiullin]: Experience of "Yulduz" Kolkhoz in Drozhzhanskii Rayon shows that this procedure is mutually beneficial. The kolkhoz leases young cattle to families

and allocates fodder. These families fatten the bulls up to a weight of 350-400 kg and then the kolkhoz continues to fatten them rapidly and sell them to the state at a weight of 450-550 kg. Cost of a centner of weight gain produced at the farmsteads is nearly 220 rubles while cost of a centner of weight gain at the kolkhoz is 60 rubles more.

[Khabarova]: Are many cattle raised by this method?

[Nabiullin]: Last year, villagers fattened 650 young bulls on "Yulduz" Kolkhoz. The state bought 440 bulls with an average weight of 473 kg each. In January of this year, the farm delivered 222 bulls and fulfilled the half-year task. Today, 1058 bulls are being raised on farmsteads of kolkhoz members.

There is another interesting example. "Druzhba" Kolkhoz in Drozhzhanskii Rayon supplied 23 heifers to people on condition that they return some of the milk, 500 kg the first year, 1000 kg the second year and 1500 kg the third year. The calf produced by the first calving also was given to the farm. After this, the cow belonged to the family. Such a method of acquiring a cow is quite appropriate and should be used more widely.

[Khabarova]: The method of leasing heifers has been recognized. Is it advantageous for villagers to keep sows and suckling pigs?

[Nabiullin]: Calculations show that, after birth of 16 piglets from 1 sow, a family may earn up to 1000 rubles by raising them to a weight of 15-16 kg. If the families receive forage, this will be advantageous to both the people and the farm. For example, in "Krasnyy Oktyabr" Kolkhoz in Cheremshanskiy Rayon, Abdrazayakova's husband fattened 500 swine. You would think it would be impossible for the couple to keep so many pigs, let alone to fatten them. But Rakip Gayzullovich and Flera Akhmetovna are doing well: the pigs are gaining about 500 g a day. This means, they are producing 250 kg of pork daily.

[Khabarova]: What is the situation in regard to mass introduction of the family contract?

[Nabiullin]: Last year, more than 82,000 families made contracts and produced horticultural and animal husbandry products in the amount of more than 51 million rubles. Nearly 1900 families now work on a contract in animal husbandry. They tend 20,000 cows, 100,000 young cattle, 113,000 swine and 69,000 sheep.

The family contract is being used successfully to grow fodder root crops. In 1987, there were 14 family crews of machine operators in the republic, whereas last year there were 109. In Baltasinskiy Rayon, for example, nearly 3000 families are growing root crops and producing 6-7 tons of roots per cow. It is no accident that the milk yield for the region exceeded 4000 kg from a cow. The sale of milk from farmsteads increased, thanks to the fattening of personally raised cattle on root crops.

## AGRICULTURE

JPRS-UEA-89-037  
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[Khabarova]: So, the family contract shows promise?

[Nabiullin]: Of course. Such collectives today tend 2 times more cows, 1.5 times more heifers, bulls and sheep and 2.8 times more swine per worker than is tended on ordinary farms. Productivity of the animals in these groups is 20-30 percent higher, labor productivity is 2-2.5 times higher. While one worker on dairy commodity farms produces 324 centners of milk, the family crews produce about 854 centners. These are the leaders. Take the Usmanovskyh crew from "Unush" Kolkhoz in Mamadyshskiy Rayon. Tending 100 cows, the sisters milked 4200 kg of milk from each cow in the past year. Karpov and wife from "Mamadyshskiy" Sovkhoz of the same rayon obtained 4548 kg of milk, on the average, and the Garifullinykh family obtained 5868 kg.

[Khabarova]: Such collectives require attention and support....

[Nabiullin]: Certainly, everything stipulated by the agreement should be handed over on time. Without a

guaranteed supply of feed, water, electric power and other services there will be no contract. Furthermore, everything earned by the collective should be paid fully and in a timely manner. Otherwise, credibility with the people is lost, and the enterprise leader, having lost the interested field and farm manager, risks, as they say, being no better off than at the start. And such examples are, unfortunately, still all too frequent.

[Khabarova]: Now, one last question for you, Gabdulkhak Mirziyevich. Are there cattle raising cooperatives in the republic today?

[Nabiullin]: We repeatedly recommended that kolkhozes and sovkhozes organize cooperatives for raising piglets. We explained that the cooperative may carry out many functions: provide transport and fodders and organize sale of young stock. Alas! RAPO managers and specialists and farms have shown little interest in this matter.

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## FUELS

## Gas Industry Performance Reviewed

904E0005A Moscow GAZOVAYA  
PROMYSHLENNOST in Russian No 8, Aug 89 pp 2-7

[Article by A.I. Omelchenko of USSR Mingazprom [Ministry of the Gas Industry]: "The Gas Industry of the USSR: Three Years of the Five-Year Plan"]

[Text] The results of sector operations in the 12th Five-Year Plan testify to certain positive shifts in economic and social development. The qualitative indicators of production have improved and material and labor resources have begun to be utilized more efficiently under the effects of the transition to primarily economic methods of management. The social re-orientation of the economy has continued. The overall situation in the sector, however, as for the country in general, remains a difficult one. The level of economically accountable activity and the financial position of the associations and enterprises are far from identical, and reserves for raising the utilization of

capacity, accelerating scientific and technical progress and increasing labor productivity are not being fully utilized.

The gas industry operated in stable fashion in 1986-88 and provided a reliable supply of gas for the national economy and the country's population. The plans for the three years of the five-year plan were fulfilled ahead of schedule for the production of gas and condensate with oil. Some 47.5 billion cubic meters beyond the plan were produced in the country over 1986-88, including 37.3 billion cubic meters for USSR Mingazprom. Some 2.7 million tons of condensate with oil were produced in addition to plan targets over that period (Table 1). The targets for the volume of commodity output, labor productivity growth, profits and other technical and economic indicators were overfulfilled. The production volumes of consumer goods and paid services offered to the public were augmented from year to year. The work of the drilling organizations improved, and the plans for capital investment, construction and installation operations and the start-up of new fixed productive capital were overfulfilled.

Table 1. Technical and Economic Indicators of the Gas Industry For 1986-88 %

Indicator	1986	1987	1988
<b>Production of products:</b>			
USSR gas production, billions of cubic meters	686.1	727.4	770.0
—including for USSR Mingazprom	617.4	660.7	702.2
Condensate and gas production, thousands of tons	14000.2	15986.8	17503.1
Volume of gas processing, billions of cubic meters	68.0	72.3	76.6
<b>Production of product, thousands of tons:</b>			
—sulfur	1617.7	2396.5	3287.8
—gasoline	300.9	326.8	457.3
—diesel fuel	274.9	386.1	616.7
—liquefied gas	847.0	869.9	884.1
Consumer goods, millions of rubles	118.5	134.2	192.8
Public services, millions of rubles	54.4	58.0	91.3
<b>Economic indicators in industry:</b>			
Growth rate of commodity output to base (1985), percent	108.5	116.6	125.0
Growth rate of labor productivity to base (1985), percent	107.2	115.9	127.4
Profit, millions of rubles	2991.9	3169.9	3402.4
Profits for ministry, millions of rubles	6009.5	6335.8	6841.6
Number of planned unprofitable enterprises	76	16	2

The conversion of associations and enterprises to new conditions of economic operation, and especially full economic accountability and self-financing, has had a positive effect on the results of their activity. The level of economic operation has been raised, much more attention has now been devoted to qualitative indicators, and the vested interest of collectives in improving the principles of economic accountability at all levels of production management and employing more progressive forms of economic operation has been strengthened.

Profits beyond the plan totaled 605.2 million rubles for the ministry overall in 1988 as a result, and the actual expenditures as recomputed for the volume of actual output did not exceed the planned ones for all enterprises. Some 130 million rubles beyond the stipulated target were directed to the state budget. The financial position of enterprises and organizations was improved, and their solvency was raised. Non-productive expenditures were almost halved compared to 1987. Fines were reduced along with losses in the transmission of gas, accidents and idle time.

The contributions of individual enterprises and associations to ensuring good operations in the sector over the course of the first three years of the five-year plan, however, were far from identical. The Astrakhangazprom [Astrakhan Gas Industry Association] has very poor technical and economic indicators. The Orenburggazprom [Orenburg Gas Industry] PO [Production Association] (Kazakh GPU [Gas Field Administration]), Urengoystroygazdobycha [Urengoy Construction and Gas Production Association] and Stavropol UBR [Drilling Operations Administration], among others, are not meeting profit targets.

Internal working capital is not being utilized efficiently everywhere, and a significant portion of it is being diverted to reserves of material assets beyond standard levels. Some 20 enterprises exceeded the maximum level of such reserves by a total of 13 million rubles in 1988. The diversion of working capital for doing capital repairs outside the plan that are not backed up by sources of financing is continuing. Financial discipline is being violated, and some associations are settling accounts prematurely with the ministry (Tyumengazprom [Tyumen], Ukrugazprom [Ukraine], Volgotransgaz [Volga Gas Transmission, Turkmengazprom [Turkmen] and Soyuzturbogaz among others].

Growth in wages that is outstripping labor productivity is eliciting particular concern. The average wage of industrial-production personnel went up 13 percent in 1988, while labor productivity went up only 10 percent. Wages rose 10-12 percent in the contract activities of Kubangazprom [Kuban], Yakutgazprom [Yakutsk] and Soyuzburgaz [All-Union Gas Drilling] associations even though labor productivity went down. They went up on the order of 25 percent at Gruztransgaz [Georgian Gas Transmission Association], and even 38 percent in gas transmission, while wages for the gas-transmission sector overall went up an average of 11-12 percent.

There was an unjustifiably high rise in wages in planning, scientific-research and running-in organizations compared with basic operations. They went up by 1.5 times at Turkmengaztehnologiya [Turkmen Gas Technology], for example, and by 1.7 times at YuzhNII-giprogaz [All-Union Southern State Scientific-Research and Planning Institute of the Gas Industry] and VNIPI-transgaz [All-Union State Scientific-Research and Planning Institute of Gas Transmission].

All of the enterprises in basic production have been operating since 1988 under the conditions of the first model of economic accountability, which has made it possible to provide for solid economic results. The construction organizations of Yugtransgaz [Southern Gas Transmission] and Gruztransgaz have been converted to the second model. Work is currently underway at the ministry to deepen and expand the employment of various forms of economic operation and to review the standards for the formation of economic incentives for the purpose of strengthening the role of the anti-spending mechanism. Economic methods are also being

developed that provide incentives for enterprises and associations to direct profit income toward the social and productive development of labor collectives.

Economic accountability within types of production began to be developed further in 1986-88. Some 29.5 percent of the overall number of teams in the sector were converted to economic accountability for the beginning of 1989. Some 90 percent of the drilling crews and 80 percent of the rig-installation teams are working according to team-contract methods.

Economic accountability by types of production is being incorporated successfully at the machine-building enterprises. Team economic accountability is in effect at the Semipalatinsk Gas-Apparatus Plant, and entire shops have been converted to it at the Novogrudok plant. A new wing-based system for organizing production with the simultaneous incorporation of a checking system for transactions for goods and services is being created at the Uzhgorod plant. The drilling organizations of Turkmen-gazprom, Ukrugazprom and Sevvergazprom [Northern Gas Industry] are also using checking systems for transactions.

The first experience in the use of that system is already producing good results. Profits were up 490,000 rubles, the average cost per runningmeter of drilling was down an average of 103 rubles and the construction times for the wells was cut almost in half for three wells drilled under the new conditions in the Mary UBR.

A policy of social orientation of economics is being consistently realized in the sector. The production volumes of consumer goods and public services has increased over the three years. The overwhelming majority of associations and enterprises are handling the targets for their output. There are over 200 cooperatives producing consumer goods and offering paid services operating in the gas industry today.

The 1988 plan for the production of consumer goods was at the same time only 82-percent fulfilled at Kavkaztransgaz [Caucasus Gas Transmission] and just 21.6-percent fulfilled at Lentransgaz [Leningrad Gas Transmission], while many associations and enterprises still have no programs for 1989-95 to utilize empty production space or reconfigure production for the output of goods needed by the public.

The plans for the volume of paid services offered to the public were not fulfilled even though the volume of those services being performed by the sector is growing steadily. The sector plan was only 93.6-percent fulfilled in 1988, for example, due to serious shortcomings in the organization of this work, chiefly at Turkmengazprom, Orenburggazprom, Soyuzturbogaz, Soyuzgazmashparat [All-Union Gas Industry Machinery and Apparatus Association] and Uraltransgaz [Urals Gas Transmission].

Some 2.9214 million square meters of housing, clinics handling 4,360 visits per shift, hospitals with 1,995 beds,

schools with 32,665 places and children's institutions with 22,241 places were put into service over the three years of the five-year plan (Table 2). The realization of the projected program of construction of social and

consumer facilities was disrupted in 1988 nonetheless. The plans for the start-up of kindergartens, hospitals, clinics, vocational and technical schools and cultural facilities were not met.

Table 2. Social Development of the Sector %

Indicator	1986	1987	1988
Production of consumer goods (per worker), rubles	273.5	310.1	445.0
Services offered to public (per worker), rubles	127.0	135.0	227.0
Production of subsidiary farming products (per worker), kilograms:			
—meat	12.2	13.7	17.3
—milk	22.8	22.4	26.0
—vegetables	10.4	11.0	23.0
Put into service:			
—housing, thousands of square meters	865.2	1064.8	991.4
—children's preschool institutions, places	6,540	9,460	6,241
—schools, places	7,683	10,316	14,666
—hospitals, beds	676	661	658
—clinics, visits/shift	930	1,910	1,520

The greatest lags in the construction of facilities in the social sphere occurred in Astrakhangazprom. Almost 87,000 square meters of housing, kindergartens with 600 places and clinics for 480 visits per shift were not put into service. The targets for housing start-up were not fulfilled—aside from Astrakhan—by Yakutgazprom, Soyuzgazifikatsiya [All-Union Gasification Association] and Yugtransgaz. And only through the overfulfillment of the plan by other associations of the sector was the ministry able to handle the targets for housing start-up overall.

The construction of health-care, educational and cultural facilities worsened at a number of associations (Sredazgazprom [Central Asia], Urengoygazdobycha and Nadymgazprom [Nadym], among others). The construction and erection of individual residences using in-house manpower and the funds of the housing-construction cooperatives were poorly developed. The limits of capital investment allocated for the development of the social sphere are being assimilated in unsatisfactory fashion, while the volumes of incomplete construction work have increased at Tyumengazprom, Ukrugazprom and Turkmengazprom, among others.

The associations and enterprises have begun to devote greater attention to new equipment and technology with the conversion to full economic accountability. The conversion of the scientific organizations to full economic accountability and self-financing has also played a definite role in raising the efficiency of scientific and technical development. The organization of research and development has changed. Programs of operations for the creation of new process equipment are today adopted directly by the manufacturing enterprises rather than the ministries. All of this raises the responsibility of enterprises in allied industries for the end results. The functions of the customer in contracts for the creation of new equipment have been shifted directly to the associations. The coordination of operations to create equipment for sector-wide application has at the same time been retained by the ministry.

The share of environmental topics nearly tripled in 1988 as a result, while 43 percent of the volume of operations performed consisted of the creation of new technology, equipment and instruments. The volume of operations performed by temporary creative collectives with the participation of scientific workers, design engineers and production workers has tripled, while the topics of competitions have increased as well. A number of other indicators typifying the development of science and technology have also improved (Table 3).

Table 3. Development of Science and Technology %

Indicator	1986	1987	1988
Volume of scientific-research work, millions of rubles	75.99	77.75	124.17
Number of employees in science and scientific support	11,073	10,847	10,554
Economy from product cost reductions through incorporation of new technology, millions of rubles	51	52	53
Level of automation of technological processes, percent:			
—in gas production	70	74	77
—in gas transmission	85	88	92
—in processing	68	70	71
Unit power-intensiveness in gas transmission, tons of standard fuel/billion cubic meter-kilometers	—	51.2	49.1
Average yield per well-month worked, thousands of cubic meters	8,666	8,781	9,171
Extent of recovery of gas condensate from resources in gas being extracted, percent	80.6	84.6	85.5

A radical turnaround has at the same time not occurred in the work style of the institutes. Disruptions of important scientific-research work continue to be tolerated. The commercial output of reliable systems for line telemechanics, for example, has yet to be assimilated. No palpable changes have occurred in the construction of the first experimental-production complex in the country for the liquification, storage and regasification of liquified gas (Armenia). The work in substantiating the possibilities for the commercial incorporation of plasma chemistry in gas treatment has been dragged out. Developments for the application of the cycling process have not been fully expanded. Problems in assimilating the oil fringes of the Urengoy oilfield etc. are being resolved too slowly.

Economic accountability in science is still having too little effect on the scientific and technical level and efficiency of development. The number of inventions created in the sector in 1988 remained at the level of the preceding year, and even declined for a number of institutes. A narrowing of subject matter was exceedingly typical—the number of developments grew by 1.5-2 times.

One cannot today evaluate the operations of the sector according to the results of past five-year plans alone. What has been achieved could be entirely wiped out over the period that remains, which is shaping up as a most strained one. The growth rate of industrial production should be 1.7 times higher in 1989-90 than the prior years of the five-year plan. A number of associations and enterprises have not been able to restructure and prepare the essential base for the start-up of capacity for the production and treatment of gas condensate on time within the stipulated periods. There are many unresolved issues in the development and delivery of equipment, the supply of material and technical resources, the capacity of construction organizations and the quality and timely issue of planning-estimate documentation.

A strained situation is shaping up of late with the fulfillment of the five-year targets. Astrakhangazprom and Orenburggazprom have not fulfilled the plan for the production of gas and condensate for the first half of the year. The non-fulfillment of five-year targets for the production of condensate in 1989 and 1990 is expected for the ministry overall. The production volumes of sulfur, diesel fuel, gasoline, fuel oil and other products of refining are being reduced accordingly.

The principal cause of this situation is the serious lag in the construction and start-up of capacity. The construction and operational start-up of facilities for the comprehensive refining of condensate with the manufacture of gasoline, diesel fuel and liquified gas has been delayed for half a year at phase 1 of the Astrakhan GPZ [Gas Processing Plant]. The 1988 plan for the production of those products has been fulfilled by just 51 percent as a result. A considerable lag has been permitted in the erection of engineering and environmental-protection facilities at phase 2 of that plant. Domestic high-capacity equipment arrived here half a year late.

The construction of the UKPG-16 [Integrated Gas Processing Installation] (experimental line), a pumping station, the gas pipeline to the plant and the U-32 process installation had not been completed at Orenburg by the beginning of 1989. The lag in the construction of those facilities has led to a worsening of the ecological situation in the environs of the Orenburg Gas Complex.

The start-up of installations for the production and treatment of gas condensate is being delayed at the Yamburg field. The status of the start-up of oil fringes is unsatisfactory at the Urengoy field.

The solution of a whole series of serious problems facing the sector is being complicated by the rise in ecological demands and the strained economic situation taking shape in the national economy. A radical

turnaround has not occurred in raising the efficiency of social production and the inertia of the cost-is-no-object mechanism has not been surmounted; the situation has even worsened in some spheres. A regimen of economy has not everywhere become an indispensable method of economic operation; the fragmentation of capital investment is continuing and the rate of scientific and technical progress is rising too slowly; and, pay is not sufficiently linked with the results of the work of the enterprises and the personal contribution of each worker.

The revival of finance and reinforcement of monetary circulation are of paramount importance for the realization of the party policy of accelerating the social and economic development of the country and deepening the economic reform in the prevailing situation. Urgent and decisive actions making it possible to halt the further worsening of the financial situation and monetary circulation, restrain inflationary processes and stabilize the economic climate in the country are required at all levels of economic operation so as to create a solid base for the efficient functioning of the new mechanism of economic operation, the formation of the socialist market and the solution of the strategic tasks of economic and social development in the 13th Five-Year Plan.

The sector is today facing most difficult trials that will demand the maximum mobilization of manpower and reserves to escape the current situation on the part of associations, enterprises and organizations. It will be necessary to eliminate lag time in the start-up of new production capacity at the principal facilities, accelerate the creation of new underground storage capacity, intensify preparatory operations to assimilate the fields on the Yamal Peninsula and provide for the unconditional fulfillment of plans for the construction of environmental-protection facilities and the assurance of a normal ecological climate in the areas of activity of all gas-producing and refining enterprises of the ministry. Work on improving the provisions of economic accountability at all levels of management, expanding the application of new forms of organization for labor and economic operation and improving organizational structures is required.

The activeness of the associations and enterprises in the area of uncovering reserves for improving economic indicators has declined of late. It is at the same time well known that it is basically high time that measures have been adopted for reducing the usual mismanagement and disorganization. New impetus is needed to activate profound anti-spending controls and incentives and to raise the effectiveness of economic accountability.

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### Accidents at Orenburg Gas Complex Continue

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[Commentary on a report by B. Kalmantayev by First Deputy Chairman of the Orenburg Oblast Executive Committee A. Zelentsov: "Gas Attack"]

[Text] The residents of Nikolskoye have come home after being evacuated and are now putting their homes and yards in order. They were absent from the village which they had to abandon at the sound of a night alarm for almost a day. Which emergency circumstances have compelled the urgent evacuation of more than 1,000 inhabitants?

Twenty years ago, the old village in the vicinity of Orenburg found itself within the confines of a gas condensate pool which, as the newspapers reported then, had no equals in the world. Its discovery and development in the early 1970's were accompanied by a grandiose publicity show, a stream of orders and medals for the first settlers, and higher ranks and titles for the heads of the shock-work construction project.

The passage of time has revealed as clearly as possible what haste, an ill-conceived strategy of tapping the underground wealth, and the passion for reports bring about. It is a pity that people other than those who have allowed the mistakes to occur now have to correct them...

A string of accidents began at the complex. It could not have been otherwise when inherently dangerous production facilities were, as they say, slapped together in the name of the high pace of construction. The more time passed since the commissioning of the facilities, the more complex the situation became. In recent years, accidents at the gas condensate complex have become the rule rather than an exception.

However, let us go back to the village of Nikolskoye. At 2:00 a.m., its citizens were awakened because they began to suffocate. The roar resembling that of a jet preparing to take off came from the direction of a well which is located not far from the village.

Soon the lights of buses and trucks on duty cut through the darkness in the street: They had arrived in order to evacuate the people from the area where their lives were in danger.

Three hours before that, it seemed that no trouble was in store. At the well, scheduled repairs were under way which were performed by the team of foreman Vladimir Nikolayev. Judging by his explanatory statement, it became necessary for him to consult specialists. They got in touch with the dispatching service on the radio, suspending work on the well for the time being. Manuals envisage strict procedures in such cases which, by all signs, the repair crew ignored. It turned out that the steam ejector was not activated, as is the practice under the circumstances. Apparently, there were no repair crew

members at the well; otherwise, they would have detected the appearance of gas not by the powerful rumbling but still by its weak fizzing. They missed that moment either due to negligence or a flagrant violation of labor discipline. With the connivance of the people, the elements got more powerful: By midnight, the ejection of gas from the well got out of control. Unfortunately, the wind was blowing toward the village.

The citizens of Nikolskoye are accustomed to the smell of gas. Tractor operators at the local "Progress" collective farm sometimes know more about the condition of the wells than the well crews, though they and their vehicles stay far away from them: It is not safe to approach the compounds of the gas industry, as all kinds of emergencies happen there every now and then.

When the village went to sleep, the concentration of gas was within bounds. In a little more than an hour, it exceeded the admissible level by a factor of 5, and in the middle of the night—by a factor of more than 68!

Rashid Absalyamov, a resident of Nikolskoye, said:

"After midnight, I woke up suffering from acute asphyxiation. I woke up my family, neighbors. I raised the alarm for the entire street. Our daughter began to show signs of gas inhalation... Luckily, at this time the buses pulled up."

Nikolay Obukhov made a call to the rescue service. Had he been half an hour late the consequences of the accident could have turned out tragic.

First secretary of the Orenburgskiy Rayon Party Committee M. Zilist explained:

"The situation in Nikolskoye, beginning with the initial minutes of alarm, was under the control of soviet and party organizations and rescue services. Militia employees were a great help. We are grateful to the drivers of buses and on-duty motor vehicles, many of whom took part in carrying people without any instructions to this effect. We are grateful to the neighbors of the citizens of Nikolskoye who helped put up the residents evacuated. At the first crack of dawn, chiefs of collective farms of the rayon came to Dedurovka offering their assistance with putting up the evacuees. Luckily, this was not necessary. The gas emergency teams subdued the gusher. Workers and specialists of a production administration of the Orebueggazprom Association helped them. In a word, trouble brings people closer together. However, it is much better to do without accidents which jeopardize the health and even life of people."

As a result of the accident, more than 50 citizens of the village suffered gas inhalation. Ten of them were hospitalized, but by now their lives are not in danger.

...We walked along a deserted street in the village. There were two militiamen in front of us, with gas masks dangling at the side. I had a gas mask of my own. It was not heavy, but it did put a great burden on my shoulders! How do the citizens of the villages feel in the vicinity of

which the extraction of gas condensate raw materials proceeds (until recently, such materials were called "the pride and glory of the land of Orenburg")?

Every night, the citizens of Nikolskoye go to bed alarmed: What does yet another night have in store for them?

[Signed] B. Kalmantayev, Orenburg Oblast First Deputy Chairman of the Orenburg Oblast Executive Committee A. Zelentsov comments on the report:

In recent months, several major accidents, including those with fatalities, have occurred in the gas complex of Orenburg. The ejection in the area of the village of Nikolskoye is one of them. At present, a commission is at work which will determine the cause of the event. I would like to stress that, as a rule, emergencies are caused by the carelessness, I would even say negligence, of those who have a duty to observe regulations carefully and monitor the proper operation of equipment.

A most acute ecological situation in the areas of gas extraction and processing has not developed overnight. Sad as it may be to realize, we have been proceeding toward this situation purposefully. As early as in the beginning of the 1970's, it was planned to resettle the villages which are situated dangerously close to the gas treatment plant. People were preparing for the move. However, it has been years since they packed their bags. The gas industry has not kept its promise to resettle the villages. Worse yet, the economy in once strong collective and state farms was undermined. In Orenburgskiy Rayon alone, the gas industry has withdrawn from use about 7,000 hectares of fertile soil. No compensation has been made for it. Moreover, the feeling of concern has been replaced by incomprehensible and groundless optimism: Maybe it will work out somehow.

However, the awakening was rude. SOVETSKAYA ROSSIYA has reported on the tragedy of Muzhichya Pavlovka. It was contaminated, and its citizens were evacuated to Orenburg; apartments of legitimate people on the waiting list were given to them. By now, the management of the gas treatment plant has arranged for Czechoslovak construction workers to build a settlement for the former residents of Muzhichya Pavlovka. However, what guarantee is there that a tragedy will not recur someplace else?

Natural gas has given a powerful impetus to the development of the oblast, but it has also brought many misfortunes. The lack of oversight of the Orenburggazprom has brought about sad consequences. It was noted at a session of the oblast soviet which considered the issue of ecological situation in the Orenburg area that the Orenburggazprom Association (General Director V. Speranskiy) has been failing to commission installations for additional gas purification. As a result, up to 100,000 tons of harmful substances a year are discharged into the atmosphere. The oblast executive committee has approached the state concern Gazprom (former Ministry

of the Gas Industry) with a proposal to sternly reprimand the managers of the gas industry in the oblast.

At present, the fourth unit of the gas treatment plant is under construction. Our firm position is that production over there has got to be ecologically clean. If there is no consent by the oblast committee for environmental protection, there will be no favorable decision by the oblast executive committee.

## ELECTRIC POWER GENERATION

### Sentenced Chernobyl AES Director Bryukhanov Interviewed

18220208 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 12 Sep 89 p 3

[Interview with V.P. Bryukhanov, former director, Chernobyl AES, now a prisoner, by Ye. Kolesnikova, special correspondent: "Bryukhanov's Version"]

[Text] This is not the confession of a convicted man, nor is it a justification. These are the views of the former director of the Chernobyl AES on the events preceding the catastrophe.

On a sweltering July night, I eagerly read the article "Chernobyl Notebook," published in NOVYY MIR. Not understanding much about the design of reactors and complicated technology, I paid more attention to the behavior of people in the center of the tragedy. I was struck by how harshly and ruthlessly the author judged both those who could object and refute them and those who no longer had that possibility. Later, I will learn that many exonerated heros of "Chernobyl Notebooks" will scowl as they read these writings by a specialist. It is agreed to write a collective letter to the journal, but, after thinking it over, I did not go along with it. All this will be later.

Then, in July, I went to the Administration of Correctional Affairs with a request to examine the evidence concerning Bryukhanov, the convicted former director of the Chernobyl AES. I wanted to talk with him about many things. About the reasons for the accident, about people with whom fate dealt with such sternness. On the eve of my departure to the penal colony, I received a telex: "Bryukhanov has refused to meet with journalists." However, I went anyway.

The sun is breaking through the blinds, it is warm beyond the window; two convicts, brown from sunburn, are strolling about in colorful trunks. I am sitting with Bryukhanov in the office of the colony director. Viktor Petrovich smokes and tersely discusses his daily life. I have already learned that he is a steamfitter in the zone, maintaining the pipes and pumps. He has an excellent knowledge of his job and is respected. The council of the colony collective elected him as its representative. Short, thin, with cropped hair, wearing a shirt with "Bryukhanov, V., Brigade No 122" sewn onto its back, he in no way looks like a broken, despairing person. For 3 years

he has been studying English; however there is no one with whom to talk, as he has made no friends in the area. Who here knows foreign languages? He reads newspapers and journals and sometimes watches television. So far not one day has passed when he does not think about Chernobyl.

After graduation from the Tashkent Polytechnic Institute, Bryukhanov went to work at the Angreneskaya GRES. The equipment there was obsolete, but qualitatively new equipment was arriving in the Ukraine. Like any specialist interested in his work, Bryukhanov wanted to work with it. He sent a short resume to the Slavyanskaya GRES and soon received a job offer. True, he was accepted for a low ranking position, senior foreman. After the startup of the first, and largest block, he was named deputy chief engineer. In 1970 Bryukhanov received an offer to work on the Chernobyl AES.

Bryukhanov: At that time there was no sign of the station. There was no city of Pripyat; there were no specialists. At the construction site, there was only a forest and the sky overhead. For some reason I was not afraid, I was confident I could handle it. Could I really conceive what this AES, under construction, would be? The minister and his retinue arrived by helicopter and pounded in a marker stake. I walked along and thought: "Here, in my briefcase, is the future station..." Soon a temporary settlement was built. My family joined me. The barracks was disassembled and a school built from the lumber. My daughter Lilya and my son Oleg went there.

It was not only necessary to build the AES, start up the blocks and "knock out" the equipment for the next ones, but also to construct housing and kindergartens, supply the city with produce, repair utilities, replace the deteriorated water lines, maintain the swimming pools, of which Pripyat had four, and hire key personnel. Need I go on? Before I had filled even a single page of my notebook, Viktor Petrovich had roughly outlined the obligations of an AES director. Incidentally, Bryukhanov was one of the first directors in the sector when it was agreed to make the transition from construction to operation. The others, overburdened with concerns, refused.

Bryukhanov: For example, the gorispolkom phoned and said that the city heating system was rusted out. The time had come to replace it. This meant that I had to find a couple of million somewhere, deceive the bank; otherwise, the money allocated to the station would not be transferred to the city. I had to sign a contract with installation workers. After one assignment was completed there was another one. A hothouse had to be built and the city supplied with tomatoes. Honestly, I never understood the tomato situation, but a short time later I began to distinguish the varieties and mastered hydroponics.

A haydryer was also built. However, when it came to consumer goods, I seized my head in both hands. An order was issued—every enterprise, including the AES, had to produce something for the public. Apparently, this did not

mean electricity. At practically every plenum and party meeting they started trying to persuade me that there was no way the Chernobyl AES could produce these goods. What could it produce? As a joke, somebody suggested making a nuclear-powered meat cutter. They laughed and adjourned but I could not sleep at night. Colleagues at other power plants were already producing. I saw souvenirs from the Beloyarskaya AES. Budennovskiy's troyka was rushing across the steppe. The scene, the rider and the horse were accurately depicted on an aluminum plate. And it was cheap. But who needs all this?

I understand that it is doubtful as to whether one can directly link the safety of the AES with the management concerns that Bryukhanov now indignantly recalls. However, all those tomatoes, haydryers and souvenirs took more than just effort. They created a unique psychological climate where a worker might forget that he is a nuclear worker and that his work has the potential to inflict colossal damage on human health. The personnel and the director understood the absurdity of such requests. Moreover, it was impossible to carry them out without violating instructions and financial discipline. Thus, neglect of some trifling instructions gradually carried over to the neglect of others which had to be implemented automatically.

**Bryukhanov:** Of course, I could stamp my feet and announce "This is enough; a nuclear power plant is not a crafts cooperative. We will do only what we are supposed to—generate energy." What would that have led to? I would have been released and transferred to another position, with less pay. However, the matter does not involve personal ambitions. Instead of me, Bryukhanov, all this would have to be done by the next manager. It is beyond the strength of one person to break a decades-old system of economic and management decisions. He cannot be blamed for finally becoming a slave to this system.

The former director has an excellent memory. He remembers many figures, from the technical data of any unit to the length of water pipe in Pripyat. His main recollections are that something was always in short supply and how he had to requisition, negotiate and eliminate things, not only for the city, but for the AES itself.

**Bryukhanov:** The ministry issued an order saying that for fire safety purposes the roof of the turbine building had to be replaced. However, the order did not say a word about where we could get enough roofing to cover a building a kilometer long and 500 meters wide. Forget about the roof. We contrived and got one that was not such a fire danger. Cables were another matter. There is a clearly worded ruling that cables used in a nuclear power plant must have a fireproof sheath. There is a ruling, but no cable. In despair of finding such cable, I began to gather documents to get a waiver to keep the cable we had because we couldn't find any other. This was granted. However, everybody understood that this meant a serious fire danger.

Bryukhanov remembers other episodes, ordinary to him, but they chilled my spine. I suddenly realized that in spite of the stereotypes that have been with it since its childhood, nuclear power engineering has the same disorder as in any other sector. Even though it has special dangers, there are no exceptions here: low quality designs, suppliers do not meet deadlines, subcontractors do not send the right equipment; pressured by circumstances, operators violate instructions; while the AES director, supposedly the master's steward, takes care of everything, from finances to hay. And everybody is certain that the AES is safe! Repair work on the fourth block began on 25 April. Stopping the reactor, they decided to run an experiment. However that day there was a disruption in the energy system. The dispatcher, guessing that the fourth block could not operate without energy, asked to delay the experiment for a day. Reactor capacity had already been reduced...

**Bryukhanov:** The telephone rang late at night. Yu. Semenov, head of the chemical shop, quickly reported: "Something terrible has happened at the power plant, an explosion of some kind."

Arriving at the spot, I blamed the piping. Did it really break?! Why didn't they notice it in time? But when I saw that the upper part of the fourth block was completely gone, my heart stopped. I gathered the staff, talked with people and phoned Moscow. That same night I suggested evacuating people, but nobody agreed with this. It had been so firmly driven into their consciousness that nothing could happen to a reactor that it was easier not to believe their eyes than to believe something had. I still remember how I kicked the graphite block and cursed with all my heart: "To hell with the channels!" The most horrible thing that could happen at that moment was for 1 or 2 channels out of 2,000 to rupture. This would mean that the reactor could not be stopped without water, and that it would rock along into a condition which no reactor had ever been before.

It is probably not worth it to once again return to the events of that tragic April night, the more so because now they have been reconstructed down to the second. I had another goal. I wanted to dispel the rumour that has been rampant ever since that Bryukhanov ran in a panic out of the power plant and was opposed to evacuation. He was constantly in communication with Moscow and was one of the few capable of objectively reporting the situation.

Viktor Petrovich considered the accident to be a monstrous confluence of circumstances possible once in 1,000 years. In spite of five very serious mistakes by personnel and design shortcomings in the reactor, he is convinced that the accident could have been avoided. But here is the paradox. He is not certain that events similar to Chernobyl will not repeat themselves. I am aware of the indignation that Bryukhanov's version may arouse. However, I am convinced that this man was not guided by emotion, but by experience, sad experience.

A year ago, N. Lukonin, the former minister of Atomic Power, attested that now, if the personnel at any energy block made the same set of mistakes as at Chernobyl an accident would not occur. Many shortcomings have been eliminated. His position is shared by V. Malyshev, chairman of USSR Gosatomnadzor [State Committee for Safety in the Atomic Power Industry]. Water-graphite RBMK [High-Power pressure-tube reactors] had design shortcomings making it possible for them to get out of control. These have been eliminated. By changing the neutron-physical characteristics of these reactors, designers have attained a more favorable ratio between uranium and graphite. Additional stationary moderators have been installed on all such reactors in the country. It is technically impossible to remove them from the active zone. It takes more than an hour to remove one. Shielding control has been modernized. The moderator rods can be loaded in 12 seconds rather than 18. A system to load them in 2 seconds has been developed. Such shielding is protection from the most improbable situation. In V. Malyshev's opinion all this substantially improves the reliability of AES operation and, through technical measures, eliminates the possibility of repeating the Chernobyl accident.

Viktor Petrovich read about this; what is it that frightens him?

**Bryukhanov:** The attitude towards nuclear power. In order to avoid general judgements, I will give specific examples. Take design quality. If installation workers assemble a nuclear power plant precisely according to the design, even the pipes will not connect. The fire inspectors will never approve such a project. It does not include elementary provisions—there are no ventilation units for extinguishing cable fires. Of course, builders eliminate designers' shortcomings in a hurry. This is because practically all deadlines for starting up the block and other units are unrealistic. I myself have seen the "ceiling" from which they pick deadlines.

After the accident, when it became clear that the reactor was destroyed, A. Mayorets, minister of power and electrification at that time, ordered us to make a schedule for rebuilding the fourth power block. He assured the governmental commission that by the fall or winter not only the fourth, but the fifth would start up! Naturally none started. Then what? Was there an emergency? No. Perhaps somebody was punished for deadlines picked off the ceiling. I don't recall.

Furthermore, Chernobyl AES personnel were censured repeatedly after the catastrophe. Before it, however, no special complaints were made. Reviews were more than sufficient and comments were acted upon. However, not a single such analysis was made with regard to any emergency situation. At other nuclear power plants there have been instances when the number of rods was less than critical and not a single scientist or manager in the sector was alarmed. On the contrary, the institute psychologically lulled people, saying the reactor was as reliable as a safe. Where did personnel learn their working habits? We

began constructing a training center at the Chernobyl AES. We were able to buy only computers; then came the accident.

In looking over my criminal case, I stumbled across an interesting document. Long before the accident, Volkov, a scientist from the Atomic Power Institute imeni I. V. Kurchatov, directed the attention of Academician A. Aleksandrov to shortcomings in RBMK reactors. He suggested changing the design of the fuel elements. He was not the only one. Nobody was startled. Where is the guarantee that requirements have been strengthened not only in words but in deeds? A small item: Nuclear reactors are still fitted out with low quality equipment even though everything should be intended exclusively for them.

Bryukhanov was sentenced to 10 years. Once he has served his term he hopes to again return to an AES, if possible to Chernobyl. During the accident Viktor Petrovich was exposed to radiation, but that did not stop him. At night he dreams about Pripyat. When asked if he considers himself guilty, his answer is strikingly calm: "Yes, I think so, but not to the same extent as the court decided. Everything cannot be pinned on one person; there were some who were directly guilty and some indirectly." He added: "There is one reason I do not want to meet with journalists—people will think that I am trying to justify myself."

I was told that after the sentencing the presiding judge was impressed by the dignity and restraint with which Bryukhanov had conducted himself. It is obviously no accident that the Chernobyl AES collective gathered 50 signatures on a petition for clemency. I do not know the feelings of his former coworkers, but the severity of the sentence was greeted with disbelief by others.

"I think that even if Bryukhanov had not been at the accident, the court's decision would have been the same," says G. Kopchinskiy, head of the Atomic Energy Department at the USSR Council of Ministers Bureau for the Fuel and Energy Complex. They did not judge a man, but a position. Bryukhanov suffered for the numerous mistakes made by personnel and for design shortcomings in the reactor, even though he might not be the only one guilty for these. In my view, one of the main reasons for the accident was blind faith in the safety of nuclear power. However, the people who for years have been instilling this belief did not sit on the defendant's bench with Bryukhanov.

In the case it was written: "...the main reasons for the accident were gross violations of rules to assure nuclear safety during operations in which there was potential for an explosion." However, at that time what operations at a nuclear power plant were considered to have a danger of explosion? This is not mentioned in a single document.

"I remember well," continued Georgiy Alekseyevich, "what Bryukhanov was doing and what he was responsible for. Yes, the testing program was badly put together, but the chief engineer was responsible for that.

At that time we had still not worked out specific lines of responsibility,—who among the management was responsible for what at that large enterprise. When there is an accident, the top official is blamed for everything. The director is transformed into a slave of circumstances."

I recall: Today there are 45 energy blocks in operation in our country and 11 AESes are under construction. Nuclear power engineering continues to develop. Let us judge ourselves more strictly now, so as not to have to judge anybody later.

### Poor Condition of Municipal Heating Systems Criticized

*18220209 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 17 Sep 89 p 1*

[Article by A. Skvortsov, candidate of technical sciences: "Winter is Demanding—An Emergency Situation"]

[Text] Urban centralized heat supply requires the construction of a widespread network of underground pipes—heat networks or heat lines, as they are called in the newspapers. The capital investments for their installation are very great. What is more, because of their low technical standards and obsolete equipment, heat lines are the weakest link in our cities' heat supply. It must be admitted that their structural, mechanical and insulation components are insufficiently reliable and do not meet modern requirements.

In spite of the annual campaigns to prepare cities for winter, the breakdowns in heat supply and excess consumption of fuel and thermal energy are not only not declining, but, on the contrary, are increasing each year.

Inspections in Moscow revealed about 2,000 emergencies, but pipes continued to break throughout the entire heating season. Pedestrians, and in Gorky even a bus, fell into hollowed out areas under the asphalt filled with boiling water and have been burned.

In Leningrad entire sections of the city have repeatedly been left without hot water and heat. Every year here there are about 4,000 breaks in main lines.

On Leninskiy Prospekt in Moscow, boiling water and steam escaping from a large diameter heat pipe completely paralyzed street traffic around Oktyabrskaya Ploshchad. Several bystanders were burned and had to be sent to the First Aid Institute. This accident left 135 buildings without hot water supply.

In October 1988 there was a large accident involving the main heat pipes in the city of Yuzhno-Sakhalinsk, completely halting heat supply to this city of 200,000.

Who is responsible for these losses? It is not so easy to answer this question. Many organizations in various ministries and agencies are engaged in the design, construction and operation of heat supply networks. Some of them do not have enough experience or qualified staff.

Problems in urban heat supply are under the jurisdiction of the USSR Ministry of Power and Electrification, USSR Gosstroy and the RSFSR Minzhilkomkhoz [Ministry of Housing and Municipal Services]. However, not one of these agencies considers itself responsible for the technical condition of urban heat networks or for their design and construction. As a result, for many years no use has been made of expensive new, more improved equipment and insulation developed at laboratories of scientific research organizations in these agencies and of patented inventions.

These are the facts. For example, technical documentation for the manufacture of a series of improved designs for non-channel heat pipes has faded and is uselessly gathering dust on archive shelves.

Accidents caused by the corrosion of pipe and the huge nonproductive losses of thermal energy spent heating the surrounding ground have two primary causes: the lack of reliable anticorrosion protective coatings and the use of unsuitable insulation materials when pipes are laid in moist soils (and most are).

Only technical backwardness and conservative design practices can explain the continuing use in underground networks of materials subject to very wet conditions. There still are practically no hydro-insulation materials protecting warm pipes from moisture. As a result, pipe corrosion is intensified and heat losses are increased several fold.

Another example of technical backwardness in heat networks is the extensive use of compensator packing to compensate for thermal expansion. Such packing was designed back at the end of the last century. Because of the elimination of periodic hot water venting, these compensators require constant observation and servicing.

Service personnel (pipefitters and inspectors) have to work in extremely difficult conditions, with high air temperatures in close quarters (underground chambers) filled with steam and hot water. One can imagine the difficult manual labor involved in servicing.

Decades have passed since numerous scientific-technical conferences and symposia made decisions about central heat supply for cities and the need for the industrial production of improved equipment for heat lines—compensators, small valves (ventilators), steel pipe with temperature resistant anticorrosion coating. Bring them in right now!

Construction-installation organizations are still using pipe without protective coating. This is why in large cities—Moscow, Leningrad, Novosibirsk and others—it is necessary to replace 2-3 percent of the heat network annually. On the average, urban central heat supply systems annually use about 100,000 tons of metal for this purpose.

Open trenches on city streets are becoming a real disaster to pedestrians and motor vehicles. In 1986 city traffic was halted for a long time in Cheboksary and Petrozavodsk, while in 1987 the streets of Gorkiy and Vladivostok looked as if they had been bombed, everything was turned upside down....

The same picture could be seen during the widespread replacement of corrosion damaged pipes laid under the streets in Odessa, Lipetsk, Kuybyshev, Saratov, Omsk and Novosibirsk.

With the conversion of urban energy enterprises to cost accounting it will soon be necessary to meter and price thermal energy lost in uselessly heating the surrounding soil. However, up until now, because heat meters have not been mass produced at the Tallinn and Kiev Etalon Plants there is practically no regular metering of heat losses.

Insulation made from moisture-proof hydrophobic materials is a new heat insulator protecting pipes from corrosion and heat loss. Technical data on them are published in specialized literature. However, because of departmental conservatism they remain unused.

### Minister on Measures to Avoid Fall, Winter Power Shortages

18220211 Moscow PRAVITELSTVENNY VESTNIK  
in Russian No 18, Sep 89 p 6

[Article by Yu. K. Semenov, USSR Minister of Power and Electrification: "So that the Cold Does Not Take Us by Surprise"; first two paragraphs are PRAVITELSTVENNY VESTNIK introduction]

[Text] Do you want to know what concerns members of the government and gives them no rest? The times are presenting them ever newer and more complicated tasks. Although a minister's day is loaded to the limit, we asked them to find the possibility of sharing their concerns and thoughts with readers. Through our paper members of the government will express themselves about the problems of most concern to them and to all of us, answer readers' questions, talk things over and give an accounting of what they have done. This tribune in our paper will appear under the rubric "Your Word, Comrade Minister!"

So, the introduction to new members of the government, whom we described in our last four, continues. Today we give the word to E. A. Shevardnadze, Yu. K. Semenov and G. A. Yagodin.

We are accustomed to electricity being always at our service, whether at home or at work. The seeming simplicity of obtaining electrical energy often gives rise to a wasteful, inefficient attitude towards extremely valuable energy resources. Some people have the illusion that it is possible to get along without introducing new power engineering projects and without constructing electric power plants. It has become fashionable to put

power engineering in opposition to ecology. While correcting past errors and protecting nature everywhere we should, however, clearly understand that it is impossible to solve ecological problems without reliable supplies of electricity.

Reductions in electricity generation at AESes, widespread opposition to the completion of power plants already begun, and errors in major construction in the sector itself have all made this winter a difficult situation to face. Shortfalls in the energy balance during the forthcoming fall-winter is estimated at 6 million kilowatts, about 8 percent of the amount used by the country's industry. The situation is all the more alarming because we cannot count on a third consecutive warm winter. According to the forecast by Gidrometsentr [Hydrometeorology Center], the fall will be short and the winter cold.

There are difficult conditions in the Transcaucasus, where, at the request of the republic, the Armenian AES, in the North Caucasus region, was stopped. Delays in introducing AES capacity have brought serious complications to energy supplies in the Ukraine. Last year was a dry one in Central Asia. At the request of republic organs, water in hydroelectric station reservoirs was used for agricultural needs. As a result large GES's such as the Nurek are approaching winter with low reservoirs. It was also a dry summer in Siberia, increasing the load on thermal electric power plants in the region.

There is an increasing amount of old equipment in power engineering. This naturally complicates the general situation. In view of the evolving energy balance, this spring workers in the sector began organizing the repair of power engineering equipment. This involves bringing 600 power plants and 700 enterprises in the electricity and heat supply network into full readiness. Major repairs have been performed on units with a total capacity of 60 million kilowatts. This is ahead of the 1989 schedule.

Recalling the bitter experiences of years past, the USSR Ministry of Power and Electrification has increased the repair and replacement of worn out heat distribution networks, creating and equipping special units for this. During the year they will have to lay 982 kilometers of main heat supply lines. Unfortunately, this work is being delayed by shortages of large diameter pipe. Only 65 percent of our orders have been filled.

The reliability of energy supplies to the economy and the public depends greatly upon the smooth operation of generating capacity. In repairing old units and introducing new capacity, power engineering workers are greatly hindered by poorly organized supply, the lack of materials, spare parts and cables.

The stability of operations during the winter depends upon fuel supplies. There are still delays in accumulating coal. These are mainly the fault of railroad workers. We count upon coordinated work by all elements of the fuel conveyor: coal, oil, oil refining and transportation

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workers and upon the precise organization of fuel reception at power plants in any weather and temperature.

Winter does not promise to be easy. However, not everything depends upon power engineering workers. Much will be determined by preparations for freezing weather at enterprises, organizations, housing and municipal services at cities, settlements, kolkhozes and sovkhozes.

The cold will whistle through all cracks and crevices. This is why we need smooth collective work, a responsible and thrifty attitude towards energy resources and an understanding that our common efforts create a clear rhythm for the country's economy.

### **Ekibastuz Workers Express Concern Over Complex's Future**

18220212 Alma-Ata KAZAKHSTANSKAYA PRAVDA  
in Russian 11 Aug 89 p 2

[Letter by A. Komarov, leader, comprehensive brigade SU [Construction Administration], GRES-2; A. Glamazdin, installation brigade leader, Energostroymontazh [Energy Construction and Installation] Administration; N. Mryl, comprehensive brigade leader, Energostroymekhanizatsiya Administration: "GRES in the Fog—An Open Letter to V. T. Kazachkov, Kazakh SSR Minister of Power and Electrification"]

[Text] Dear Viktor Tikhonovich!

The construction of the Ekibastuz GRES-2 began in 1980. Many of us came here because it was a great project, covered by the press and television. We dreamed about constructing the Ekibastuz Fuel and Energy Complex. The majority of us linked our fate with Ekibastuz. However, recently the word has started spreading that a fourth station will not be built; that it is unknown when the third will be constructed and even unclear as to whether the second will be completed. There are all sorts of doubts and talk.

Sad as it may seem, the rumours are being confirmed. Recently the client, the GRES-2 board of directors, tried to pay for only part of the work we completed, referring to a lack of financing and money. How are we to understand this? After all, there is construction equipment; blueprints, estimates and plans for construction have been provided. They should be unwaveringly followed. For example, the plans stipulate that all of the entire facilities around the station (and it is to be used by four energy blocks) must be completed by the startup of the first block. At the same time the client is not paying us for work done beyond its boundaries, that is, after the ninth axis of the main building. It is becoming laughable. On one facility, for example, the block control panel, designed for two blocks and occupying space in the eighth through tenth axes of the main building, only work on the ninth is paid for. There is a similar absurd situation with the construction of open distribution systems and other objects. Logically, for the normal

installation of one energy block it is necessary to do considerable work on others, and also on auxiliary objects, as they are all linked into one technological chain.

What will happen if we curtail the construction of the facilities around the station? The area will be flooded with water, as there is a 5-meter difference in grade between the station reservoir and the foundation of the main building. This means that millions of rubles will have to be spent in fighting the water and powerful pumping stations built to pump thousands of cubic meters of water daily. Or look at the coal conveyor belt tightening unit. According to the design, it is on the 14th axis. The station management rejected the builders' request to build it on the ninth. No payments have been made for work on the ninth axis. However, without this conveyor it is impossible to start up the first energy block.

One could give many such examples. All this indicates that it is arbitrary to separate the blocks in the flow line construction we are attempting to perform. Numerous pipes and other utilities continue further; they cannot be "cut off" at the ninth axis.

Why is there not enough money for the first energy block? Who is to blame for this? Who is at fault for not keeping up with the pace on all sorts of construction? Certainly not us builders. According to a representative of the client, somebody, in Moscow, or in Alma-Ata, has not provided the money. And what, it is asked, is the GRES-2 directorate doing? It is on the spot and its staff exceeds 1,000. The situation has gotten so bad that we are only now receiving drawings for the first startup complex. To our questions, representatives of the client answer: "We have sent a letter about that to Moscow." This is all, this is where their concerns end. It turns out that the client is not responsible for it.

There is still no solution to the question about deliveries of equipment, especially reinforcement, pipe and ventilators. When there is equipment, then its installation is delayed for weeks.

In June our financing was completely cut off. The plan for the GRES-2 had not been approved by Goskompriroda [State Committee for the Protection of Nature] because it did not meet ecological requirements. We are in no way opposed to such measures. They are justified. However, once again, nobody reckoned with the interests of the builders; they are the point men. There were delays in paying trust workers. It's no sin to admit that many of us, especially those who are younger, live from paycheck to paycheck. Again, the client says that somebody, somewhere, did not approve the project. Isn't this the direct obligation of the board of directors? After all, the client bears complete responsibility for putting the project into operation.

Local party and soviet organs helped us get paid. However, financing as such is still not available. This hangs over us like the sword of Damocles.

With the conversion of the administration to lease contract, our labor collectives have been reduced and work has become even harder. Today we are being paid, but what will happen in a few months? Such conditions are psychologically and morally difficult for us workers. Only a high consciousness of our duty and the continuous nature of the techniques for constructing the station keep us working. If not, the project would be stopped cold. However, we do not want to tolerate any more confusion due to poor organization and irresponsibility on the part of services in Minenergo [Ministry of Power and Electrification]. We demand that they do not create a nervous situation for us every month and that they make it possible to work normally. We think that at such a decisive time for the project all the leading services in Minenergo should direct their efforts to agree upon the plans for the station so that they meet ecological requirements. So far the facts indicate that nobody is intelligently involved in reworking these plans.

\* \* \*

**Commentary by the Department for Economic Policy at KAZAKHSTANSKAYA PRAVDA:**

So, republic Goskompriroda has halted financing for the construction of the GRES-2 because it is deliberately destructive of the environment. This situation could have been foreseen. It is no secret that the first station was built with no concern for ecology.

According to Goskompriroda data, the one GRES now in operation at the Ekibastuz Fuel and Energy Complex produces as much waste as the plans predicted all four would. The future set of stations were to have produced a little more than a million tons of waste annually. In

1987, the first station alone emitted 900,000 tons of pollutants, and last year more than 700,000.

The construction of the second GRES was halted because all equipment there is the same as the GRES-1. Starting up the new boilers will increase emissions. One cannot agree with this. Clearly, in order to introduce the second station it is necessary to find and propose a way of reducing emissions. However, judging from the construction workers' letter, Minenergo services are not rushing to do this. Of course, construction must continue. There is no doubt about this. After all, about 400 million rubles of public money have already been spent on the station. The crux of the problem is that the GRES completed by the builders be ecologically clean and not poison the environment.

At the same time the interests of the 5,000-strong collective at the Ekibastuz GRES-2 cannot be ignored. This combat-ready collective must not be broken up, as it has been tempered in battle and acquired experience constructing the GRES-1. It should not have to be put together again, when power engineering workers and the client, Minenergo, bring the plans into accordance with today's requirements.

Incidentally, the situation is fraught with far ranging social consequences. Enthusiasm alone, without normal pay, will not go far. Disorder in financing and delays in pay are evidence of this.

It is no accident that units in the trust have started thinning out. The better construction workers and riggers are going to other organizations which, in their view, are more reliable. Where, finally, is the guarantee of social protection for GRES-2 builders, when the worker would not have to think about tomorrow, and plant construction plans would not be scattered in drifting fog?

**Attitudes of Donbass Miner's Strike Committees  
Aired**

904f0006A Moscow SOTSIALISTICHESKAYA  
INDUSTRIYA in Russian 29 and 30 Sep, 4 Oct 89 p 2

[Article by V. Andriyanov and G. Dorofeyev: "Strike Committee: Strokes for a Portrait"]

[29 Sep 89, p 2]

[Text]

On the door there was a glass-covered signplate—party office. Below it there was a sheet of paper bearing a signature—strike committee. It would seem that this is an obsolete concept for us. "Strike Committees Under Capitalism"—this is a new book and one that is understandable. But for us?

We opened the doors of strike committees at mines in Donetsk, Krasnyy Luch, Yenakiyeva, Pervomaysk, Stakhanov, Antratsit, Gorlovka and Lisichansk. What is taking place behind them? What are they arguing about and thinking about there? What decisions are being handed down? There is no simple answer. Let us become acquainted with the people gathered here—they are prepared for an open discussion with journalists.

Several desks arranged in a row. Behind them young people sit in armchairs. A discussion, interrupted by the brief introductions, is continuing.

"We cannot touch the rules for safety. Each was written in blood."

"We m(~~u~~)reduc the number of ITR's [engineering and technical workers]. The staffs are inflated.

"Let us examine the technological chain."

Distracted from the general discussion, our neighbor lowers his pipe:

"Who is that on the telephone? Ilyushenko? He represents the strike committee of the Sotsdonbass Mine Administration. We had a disagreement on the matter of wages."

Judging by the discussion, the strike committee is in favor of paying the average wage to all of the strikers for the days of the strike. The director wishes to follow protocol and authorizes payment of a rate and the average wage only to those who, during the days of the strike, worked and supported the mine. This is fair! The strike committee objects: a difference of opinion exists among the miners.

Sasha Zhelonkin, a former officer political worker and now a miner, opens up a school notebook. It contains brief notes on current affairs. "Check on who is staying at the Volna Resort Hotel and require that all those who have no connection with the mine depart the hotel prior

to 30 July." Raise for review by the STK [labor committee council] the question of cottages at the Zapadnaya Mine—for whom, who made the decision and for what services."

Volodya Stemasov is taut as a string. His gaunt face is dotted with pimples. He holds on to a thick reference book entitled "Wages for a Miner."

"I completed a correspondence course at a mining technical school in order to know more about economics. I acquired such knowledge. I proved that our rate was computed incorrectly. Each shift is receiving about 30 rubles less. I estimated that these rubles were sufficient for purchasing a motorcycle."

Nor was the rate lowered only for him. And he was not the only one who missed out on vacation time or on the additional payments for evening and nighttime work. He proved his case to the chief of the sector and he visited the departments. And they walked at other mines. They wrote to the trade union committees and to the ministry. They would not listen to a single person. They listened only when everybody spoke out. And then two more points were included in the protocol which had been coordinated with a committee of the Council of Ministers and the AUCCTU: "It is established that, commencing 1 August 1989, enterprises of the coal industry will independently establish the output norms and the rates and norms for services. The basic norms will be examined as recommended." And the other point: "Commencing 1 July, to introduce for coal industry workers a payment for nighttime and evening shift work on the order of 40 and 20 percent of the wage rate respectively."

It would appear that the strike committee personnel were selected on an independent basis. The doors are opened boldly and at times even unceremoniously. These youth are clearly hardened from an organizational standpoint. Behind them—the tense days of a strike, control over the situation in the mines and negotiations with the "upper echelons" and comrades in the various areas. "I will state directly: we have underestimated the miners. I saw very knowledgeable and politically wise state personnel. Their questions proved to be very difficult ones for the leaders of the governmental committee. They succeeded in repelling the extremists." Such was the opinion of Aleksandr Zosimovich Poshtuk, 2d secretary of the Yenakiyeva Municipal Party Committee. He was in the thick of the strike and the miners elected him to the strike committee and sent him to the negotiations along with other miners. The protocol in behalf of the Yenakiyeva Strike Committee bears his signature.

Not all have remained with the strike committee since the very first days. Some miners were reproached for having too conciliatory an attitude, although these reproaches were not always fair. Others were removed because of moral considerations; for example, an individual who had been promoted ended up in a sobering station. Such an incident was recorded in Yenakiyovo.

In Antratsit, they analyzed data for seven strike committees. In them—131 individuals, 33 communists. The overwhelming majority were workers—114. Engineering and technical workers—15. The strike committees were headed by six communists. More than 60 percent of the personnel were under 35 years of age. Roughly the same situation prevails in other cities throughout the Donets Basin. With one necessary refinement: as a rule, the engineers and technicians elected to the strike committee occupy working positions.

The Yenakiyev youth were not too lazy that they failed to visit the oblast's archives: what were the staffs like 20 years ago? They learned: for example, the Aleksandrovskoye Mine Administration had 513 workers underground and another 123 on the surface. There were more mine foremen (82) and engineering and technical workers (52) and the annual coal extraction was less by 100,000 tons. Labor productivity was lower by a factor of almost two. And wages have increased from 247.8 to 375.8 rubles. Certainly, conditions have changed, the mine is being operated at a greater depth and the length of the mine workings has increased. But are these the only concerns? What about technical progress and science?

An answer is being sought by Viktor Vasilyevich Lipinskiy, chairman of the strike committee—STK. Two years ago he was mentioned in the journal PARTIYNAYA ZHIZN. The article was entitled simply: "Dealing With Criticism." During party meetings and in letters, Lipinskiy made mention of the corruption, bribes and crude violations of the rules for equipment safety—all for the sake of a ton of coal. In the belief that he falsified the facts, he was discharged for fictitious shirking and removed from the party. Intervention was required on the part of the journal of the CPSU Central Committee before the good name of this miner-communist was returned to him. This history has still not been forgotten at the mine.

Viktor Vasilyevich himself was not looking to return to the past: he was more interested in the future for his native mine. He had before him a sheaf of papers and letters. Here is a sheet, smeared with coal dust, that was taken at random from his briefcase. It contains the demands that the miners are imposing upon the board of directors. Some coincide with those we encountered at other mines and here is just one of them: "to make payments not on the basis of the registered staff but rather the actual staff." Is the essence of this matter understandable? There were mines where payments were made for years on the basis of lists, with personnel fattening themselves on unearned income while they fleeced workers. There were even old waste piles that had been adapted for visual agitation and the establishment of slogans. Let us have an end to requisitions and let us pay according to work. This is what Lipinskiy achieved.

There is still another sheet which includes a rock sample. A sector not visited by television or movie cameras. There where 20 and 40 years ago a loaded conveyer belt

traveled an endless circle: female hands extracted pieces of rock from the coal. It was only rarely that they could straighten themselves up during a shift. It was obviously difficult for them to hold onto the grip with their tired fingers:

"Almost illiterate and capable only of extracting rock, we request assistance. What kind of assistance for rock extraction work? Come and see for yourself. In the summer we are heroes. And in the winter it is hell—drafts, dust and cold. And for 8 hours we endure the cold. Please, help us with our extraction work."

Is a strike committee capable of understanding the situation and furnishing assistance to all? Serious and thoughtful individuals understand and think not. And thus stronger contacts are needed with the party committees, executive committees and enterprise administrations. In many cities the directors of mines and secretaries of party committees are elected to serve on strike committees: "The people know who are with them and who are not. This was how Fedor Alekseyevich Kotyuk, chairman of the STK strike committee for the Ordzhonikidzeugol Association, evaluated the situation. Late in the evening we became involuntary witnesses of his meeting with the secretary of the municipal party committee A. Poshtuk. A discussion took place on carrying out the requirements of the striking workers.

The reference to thoughtful and serious people was not accidental. At both the Donetsk and Voroshilovgrad mines, we listened to a history that was very similar to a picture drawn from the chronicle entitled "Cultural Revolution." In one city, they mockingly demanded that the party functionaries—party workers and directors—remove their neckties. In still another city, an individual wearing a dirty robe visited the Palace of Culture and plopped down in a velvety armchair. At times, the leaders and their families sensed a complete absence of protection. And who could protect them?

In Snezhnoye and Shaktersk, the strike committees expressed mistrust of their public procurators as they advanced unjustified accusations. A check of the republic's procurator's office failed to confirm these accusations. However, during the period of the strike the work of the procurator's offices in these cities was paralyzed.

At a meeting in Krasnyy Luch, an unsigned note was delivered: at such and such an address, an underground base for speculators was in operation. Should we go? Go! Some volunteers were selected and they departed. In essence, without an order—in accordance with an anonymous letter—a search was organized. And one day later, when this episode was being discussed in the city's newspaper, still another note was received: this time with signatures, another address and apologies. But was it worth running, as though to a fire, in response to an anonymous letter?

During a plenum of the Donetsk Oblast Party Committee, a statement was made by V. Krivenko, chairman of a strike committee in Gorlovka and a mine drifter at the Mine imeni Izotov:

"I have listened to many individuals here and I have formed an opinion: many believe that the strike committees are directed by convicts. I was also a convict. Eleven years ago I was released following a conviction for hooliganism. And so what? An individual may err and mistakes do happen. But many long ago atoned for their guilt. At the present time, these people have been promoted by the collectives in which they work and the workers know and trust them."

There are those who are prepared to share the opinion expressed by Viktor Nikolayevich. If an individual has atoned for his guilt and if his collective trusts him, then let him work and protect his interests. But how can we even think about such trust when an individual is elected to a strike committee who worked at the mine for only 2 months after serving a 7 year prison term for theft? Or permanent customers of sobering stations? Or shirkers? And such facts do exist. One can imagine the interests that would be expressed and defended by a strike committee if its tone was set by such individuals.

"I have firmly decided" we were informed at the Ordzhonikidzeugol Association by the director of the Yunkom Mine Valeriy Georgiyevich Revskiy, "that I will not work under such conditions." Similar to a majority of the Donets Basin directors, he began his work biography on a working face. On steep beds. The economists of this generation are quite familiar with the burdensome work involved in the use of pneumatic drills and shovels: "obtain more and throw it farther." During a meeting within the association, they talked and interrupted one another as the excitement increased.

"The leaders are accused of everything. And the people vote for mistrust. But the situation must be examined from the beginning"—director of the Aleksandrovskoye Mine Administration N. Yeragin.

"And the deputies and the Central Committee wished to settle accounts with us. Well directors and commanders are being released and we are losing specialists. And in mining work 10-15 years are required in order to become a true specialist. We are replacing people at the present time and we are overlooking future development. We fall behind for a year now and we spend 10 years trying to recover"—director of the Yunkom Mine V. Revskiy.

During the days of the strike, the strike committee of the Yunkom Mine set up pickets at the shaft: "Not one ton of coal! Not one meter of working to be completed!" At this time, the atmosphere, even under ground, became very heated. On a layer of 876 meters, where a bed was being worked which was subject to spontaneous combustion, the temperature exceeded the permissible norms. The threat of fire hung over the mine. But the pickets blocked the road and prevented even the mine engineering inspector from passing. The situation was saved

only through the intervention of a representative of the republic's Gosgortekhnadzor [State Committee of the Council of Ministers for Supervision of Industrial Safety and for Mining Inspection (RSFSR)].

"If the strike committee does not undertake the necessary measures, we will place the mine under the control of a VGSC [militarized mine rescue unit]," he stated. True, the situation never reached the stage where the mine had to be turned over to the mine rescuers. Common sense finally prevailed.

Mine production work is very serious and should not have to yield to emotions or unpredictable decisions. Firm knowledge enriched by experience is needed. We studied the summaries of recent days. The average daily rate of extraction, compared to last year, had fallen by more than 60,000 tons. Prior to the beginning of the strike, the mine was 859,000 tons in excess of its plan. At the present time, the plan, which has been lowered by one and a half million, is short by 420,000 tons. Labor productivity has also declined. Each day there is a shortage of 3,000-3,500 working face workers at the working positions and this is equivalent to the personnel strength for two good mines.

Neglect of the rules for equipment safety is increasing in almost all areas. Five deaths during 5 working days following the strike! The mines imeni Karl Marks and Krasnyy Profintern, Donetskaya and Yuzhno-Donbasskaya No. 3. It has been many years since the Donets Basin has experienced such a sad five-day period.

The chief of the 3d Sector of the Zolotoye Mine in Voroshilovgrad Oblast G. Shpakovskiy made a brief comment to motor mechanic I. Polyakov.

"I answer only to the strike committee or the STK," snapped the motor mechanic. "And we may elect you tomorrow." And the chief was sent to a distant point that should not even be mentioned in the press."

In today's changing picture of life in the Donets Basin, this conflicting situation is clearly outlined.

[30 Sep 89, p 2]

[Text] Rumors are spreading throughout the mines: In Torez, the strike committee has expressed its distrust of the association's general director, not two but three mine directors have been released from their posts in Donetsk and in Pervomaysk the entire municipal leadership is to be replaced. But on this occasion the rumors are not keeping pace with the truth: the strike committee in Donetsk Oblast have declared their distrust of 42 mine directors and the general directors of associations. Almost one out of every three.

"But according to what law?" Such was the question we overheard on more than one occasion. Who in the final analysis is our boss in the country?

Yes, yesterday we had no boss speaking in behalf of the strike committee. And all arrangements appeared to be

simple, orderly and understandable. True, the economic vertical was broken and disrupted: mine - association - main administration - ministry. The party structure. Soviet structure. Trade Union structure. Within the labor collective—a council, seemingly the highest authority and the most recently elected group. And yet in almost all areas—distrust. Towards the STK, the director, the trade union committee and the municipal committee.

Again we repeat, according to what law?

According to that which was made available to the chief areas of mining cities by underground personnel. They gathered together not on the basis of orders and they selected representatives not on the basis of lists suspiciously composed at higher levels. They arrived on motorcycles from the Krasnyy Oktyabr Mine. "Come and let us talk." I went with them. Well, they discussed the strike and our people listened and nobody appeared ready to make a decision. I took the first step. I asked the chief engineer: "Fedya, what are you doing?" Here we once again vacillated. And following the threat, when the decision was made to change into the miner's clothing, it was as though an important boundary had been crossed. (A miner at the Poltavskaya Mine and strike committee chairman—STK at the Ordzhonikidzeugol Association F. Kotyuk). It was him they shouted to first in the strike committee. Thus were these committees created—by the will of the people. They were formed by the people themselves and not by the people's representatives. And it was precisely this that determined the strong and fearless character of those strike committees which exercised control over those which were inclined to operate in an uncontrolled atmosphere.

The typical view of a backward and not only a backward economist: "The personnel are embittered and oppressed by the deficit. They are looking for the guilty parties. And back in the center, they are pointing in our direction. They have found the extremists. The workers are in conflict with the leaders. And why? Who stand to gain from this?"

One listens to a heated monologue and later realizes that the speakers were simply incompetent in the matter of mining affairs. And another did not consider it a great sin to acquire a home with a large tract of land for next to nothing, and a third individual flourished as a result of degrading extortions. The elections of leaders were held at 27 mines. Ten of them were removed from their posts. This included the director of the Mine Administration imeni Pervyy May A. Demure and the director of the Postnikovskoye Mine Administration V. Zhadanov.

The social values are changing. In order to live in keeping with today's times, we must change all of our former notions. Certainly, not everyone is prepared to do this. Those who cannot keep pace with the times, fall behind.

But are there really so many backward personnel. Is one out of every three directors of Donets Basin mines really unworthy of trust?

For many years now, the Mine Administration imeni Sotsialisticheskiy Donbass Newspaper has been considered to be one of the best in the republic and in the branch. The collective has been headed for more than 20 years by Yuriy Ivanovich Baranov and a red star has flown over the mine for all of these years. Over the past two five-year plans, the country received 1,118,000 tons of coal in excess of the plan from this mine—the equivalent of the annual extraction rate for a large mine. In accordance with a recommendation by Yu. Baranov or with his direct participation, innovative developments were introduced into operations aimed at improving working conditions and raising output. A group of specialists and workers devoted their efforts especially to the mechanization of auxiliary operations. This subject is worthy of separate discussion and yet here we can only note that the mechanization level for auxiliary operations at the Sotsialisticheskiy Donbass Mine is twice as high as that at other enterprises in the region. Exercises were conducted on more than one occasion at the mine by the All-Union School for Leading Experience. Miners from all of the coal basins came here to learn.

In the pursuit of imaginary savings, the former leaders of the USSR Ministry of the Coal Industry ordered the mines to employ small cross section workings and to cease hiring workers. Baranov, if you please, was one of the few who did not fear taking exception to the capital. They then accused him of wastefulness. He endured unfair criticism. On the other hand, the mine workings at the Sotsialisticheskiy Donbass are presently the best in the country.

In the early 1980's, Baranov proposed merging the mine with the Zaperevanoy Mine, one of the city's most backward enterprises. Following a thorough engineering analysis, a decision was handed down: a portion of the output was to be transferred temporarily over to the Sotsialisticheskiy Donbass, the entire mining economy was to be reorganized and the collective was to be retained. During a year's time, the mine workings were renovated, new working faces were prepared and modern coal extraction complexes were introduced into operations. By the beginning of 1983, the collective of the Zaperevalnay Mine, for the first time in a number of years, had delivered 67,000 tons of coal in excess of the plan. And since that time, as the miners are prone to state, it has been operating in the black. The average wage has increased by 130 rubles and for miners and mine drifters—by 200-250 rubles.

Three years later, this experiment was repeated with the Glubokoy Mine. This mine had barely fulfilled its plan by one half. And again there were bold engineering solutions, assistance for the personnel and forward progress realized.

"Baranov has proved himself to be an outstanding organizer," firmly stated the general director of the Donetskugol Production Association V. Ilyushenko.

"I have known Yuriy Ivanovich for a quarter of a century," added the director of DonUGI [Donets Scientific Research Institute of Coal] S. Saratikyants. "He is a creative and efficient individual. You will find everything that is new in the coal industry at the Sotsialisticheskiy Donbass Mine."

For Baranov—an engineer, communist and leader—tons of extracted coal have never been an end in itself. At that time when enterprise was not considered a virtue and the epithet "socialist" had not yet been added to it, he employed all available methods for supplying construction materials and for inspiring the miners to build their own housing, kindergartens and dining halls. Over the past 10 years, the miners have received 440 apartments which they built themselves. During this same period, the Donetsk Municipal Executive Committee assigned 111 apartments—four times less than the number built by the miners themselves. This gives some idea as to the movement in the waiting list for housing.

Using their own resources, the miners built three dining halls, a large hothouse, a hospital and a wonderful sports complex.

Today, transport workers gather together in the sports complex (the envy of any city). In accordance with a decision handed down by the strike committee, a sector chief is elected. Three candidates change places before the tribune. Together with us, the American television reporters observe the Russian wonder as they lazily point their cameras at the leaders. (Ten years ago Iona Andronov wrote in LITERATURNAYA GAZETA how bullets were fired at striking American miners. We never fired, but at the same time journalists were never allowed to approach the strikers. Neither ours nor theirs). One of the Americans was soon bothered by the spectacle and in front of the entire hall he plopped himself down on a bench.

The present chief of the sector is Revazov. He has worked 23 years as a miner and has rescued backward sectors at neighboring mines. According to an overall evaluation, he knows his work but performs in a crude manner. It is said directly: even mothers were in attendance. Somebody would cry out: "Down with Revazov!" Let us rid ourselves of him immediately: he does not know how to conduct himself properly! A second candidate withdraws his nomination: he maintains that he cannot cope with such a complicated sector. A third relies upon the human factor in his program. And he wins based upon the results of a secret ballot.

Following the session, we meet with Yuriy Ivanovich Baranov in the mine's courtyard, which resembles a large flower garden:

"If the people have so decided, then we must act accordingly." Such was his comment regarding the results of the voting—despite the fact that as a specialist Revazov is certainly stronger.

And after several days the strike committee raised the subject of Baranov's fate during a general meeting.

There were many arguments: would it be possible to assemble the people from three mines belonging to the one administration and ensure order? Proper credit must be given to the strike committee: it succeeded in assembling the people and it conducted a tense meeting in a strong, highly organized and disciplined manner, with action being taken against those who were prone to whistling and shrieking.

The miners disposed themselves by sectors and mines on concrete blocks in front of the tribune. They sat on the grass and used newspapers to shield themselves from the sun. A microphone was available to each individual. The heated words were broadcast to all areas over loudspeakers—each word fell like a spark. The talk was about earnings. About the distribution of passes, vehicles and cottages—to whom the sectors allocated them. The discussion was thorough and business-like in nature. And again there were unchecked rumors. A conflict of opinions. Because of the noise, the names could not be heard. One learned only that it was a woman from the Zaperovalnaya Mine. She mentioned how the mine had become poor and how a dining hall had been built and assistance provided to the people: "Generally speaking, it was all thanks to Baranov."

"My name is Zhmakin," stated another comrade as he stood up before the tribunal. "I have not been assigned an apartment, I do not have an automobile and I ask only that you hear me out. The time has come to mention what we have done over a period of 20 years and I have been working for 19 of them." His words concerning the building of houses and dining halls with their own resources and the modernization of the mine were muffled by a whistle. "Have patience comrades." A whistle interrupts Zhmakin. Somebody from the strike committee seizes a microphone: "Observe order!"

The appeal by the strike committee is in keeping with Baranov's report. He ignores the method of collective leadership, he selects his personnel based upon the principle of personal loyalty and he administers. Hence there is a great amount of personnel turnover in the mine administration—in 1987, 1,580 individuals or 16.5 percent were discharged and in 1988—1,136 or 14 percent. "Has anyone given any thought to the question as to why personnel are departing a leading enterprise that is directed by a Hero of Socialist Labor?"

And truly we are pondering and analyzing the figures mentioned. Who was discharged in 1987? Two hundred and fifty six were pensioned off, 57 entered the ranks of the Soviet Army, 11 left to pursue courses of study, 130 transferred over to other enterprises, 338 left following the expiration of their contracts, and for other reasons—

253. And finally, 495 left in keeping with their own desires, and 40 were discharged for shirking their responsibilities. In all, 7.5 percent. The picture was roughly the same in 1988, only more were discharged because of shirking—68 individuals. During 6 months of 1989, personnel turnover amounted to 4.3 percent.

Could it be that the strike committee comrades were deceived by the figures? I do not wish to reproach them in this regard, particularly in view of the fact that all of those with whom we met appeared to be sincere individuals who were searching for the truth. Thus we must look deeper into the phenomenon, study the facts and figures more thoroughly and repel the demagogues

"You gathered together here for the purpose of resolving the question of trust in me and I have already solved this question for myself," stated Yu. Baranov as he approached the microphone, "Many believe that I am holding onto this position out of fear of losing it. I have nothing to be ashamed of and in fact I am offended. We did everything that we possibly could for the people. Thank you for your joint cooperation. I will not be a candidate for any election. Elect whomever you choose, as I have had enough humiliation here for one day. I will no longer play this game. Today's two shifts are costing us dearly. I made a recommendation to the comrades: you can elect a director without disrupting the economy."

One day later, after the passions had cooled, we met with Yuriy Ivanovich. What did he think of that which had taken place? This was a difficult and rather self-critical discussion.

"Is it possible that they cannot forgive me for the stern manner in which I maintained labor discipline," reflected the director aloud. "Or could it be that the exactingness was transformed into humiliation of human worth? Perhaps. But I am confident of one thing: we will achieve nothing in the absence of discipline."

An episode which was bitterly recalled during a meeting by a veteran miner is engraved in our memory. He came to Baranov with a request for assistance in repairing a door and in reply he was told that no dry boards were available, not only for repair work but even for coffins.

Truly, no timber is available. But is it necessary to give such a curt reply to an individual? The heated words inflamed not only the veteran. It was momentarily forgotten that Baranov himself, aware of the helpless nature of the municipal services, accepted these sad expenditures for covering by the state budget.

He built, he gave and he took. And do we not find here a personification of the root of the offenses? The money was earned by the collective and the entire collective has the right to dispose of it and to know and control the manner in which the funds and profits are used and how passes, automobiles and houses are distributed.

On more than one occasion we met with members of the strike committee of the Mine Administration imeni Sotsialisticheskiy Donbass Newspaper and we interrogated the comrades, we listened attentively and we ourselves answered questions. They were disturbed most of all by violations of social justice. We began together to sort out the facts in detail and we noted that the accusations against Baranov with regard to the mercenary distribution of housing and automobiles were not supported by documentation.

"Thus, must we now apologize to Baranov," wondered one of the strike committee members. "This will never happen."

We do not have the right to decide what to do or to whom. One point can be made quite definitely: neither emotions nor ambition are needed here. Attempts to win back the leaders, engineers and specialists will be in vain. We have already tried this. In connection with mining and other types of work. This is why we are somewhat alarmed as we cite the collective letter of the engineering and technical workers of the Donets Basin.

"The discrimination of the branch's leaders and specialists has brought about a weakening in production and labor discipline. A sharp increase has taken place in the number of injuries involving serious if not fatal consequences. The special elections of leaders carried out in response to a demand by the strike committees and the forcible and unjustified replacement of coal production specialists are intensifying the destabilization of enterprise operations and having an extremely adverse effect on restoration of the mining economy and on ensuring safe working conditions. In addition, they are bringing about an unpredictable interchangeability of leading and engineering personnel and the diversion of the better and more experienced production organizers to the administrative sphere. There are those who are deliberately driving a wedge between the workers and the intelligentsia. The well known problems and difficulties in the development of the branch's production and social sphere arose not because of guilt on the part of the engineering and technical workers."

The mining engineers are demanding an end to the fiery passions that are barely concealed by democratic slogans.

Earlier we enjoyed repeating the fact that we do not have irreplaceable personnel. But the situation has changed.

[4 Oct 89, p 2]

[Text] Forty seven points of the protocol on agreed-upon measures, signed by the strike committees and a committee of the USSR Council of Ministers and the AUCCTU, touch upon all of the mining problems: the branch structure, the independence of mines, wages, the health of miners, and their daily routine.

It is hoped that we will not be accused of being immodest if we mention that the above constitute the subjects of

letters received from the Donets Basin, letters which were published in SOTSIALISTICHESKAYA INDUSTRIYA last summer under the general title "Life of a Miner." A large amount of mail was received following publication, with many of the letters being printed in the newspaper. The item "Life of a Miner" was recalled during a session of the USSR Supreme Soviet, at which time the deputies were discussing the candidacy of Mikhail Ivanovich Shchadov for the position of Minister of the Coal Industry.

Following a number of speeches, the Board of Directors of Minugleprom [Ministry of the Coal Industry], Gospotekhnadzor [State Committee of the Council of Ministers for Supervision of Industrial Safety and for Mining Inspection (RSFSR)] and the Presidium of the Central Committee of the trade union for coal industry workers held a conference which lasted an entire day. During a heated discussion, the materials of the newspaper were supported and augmented by new facts. Of 962 working and preparatory faces in the Donets Basin in which a requirement exists for lowering the temperature, it was noted during the conference that the sanitary norms were achieved at only 195. An increasing number of miners are becoming ill with vibration disease or with pneumoconiosis.

It is obvious that the comrades did not stop at merely quoting facts. An objective multiple-plan decree was prepared—with specific schedules, executive agents and the names of individuals responsible for exercising control. A special messenger delivered a reply from the minister, and the newspaper published it immediately. It was at this point that we made arrangements to return one year later to the publication and to write notes under the arbitrary title: "Life of a Miner and Life of an Order."

It happened that we returned earlier, at a time when Mikhail Ivanovich Shchadov was discussing his program during a session of the USSR Supreme Soviet. Proper credit should be given: the candidate minister was sufficiently self-critical. Roughly 365,000 miners are awaiting apartments. There are water shortages in the mining cities and settlements. Ecology. The deputies, in supporting the candidacy of the minister, directed his attention to the problems of the mining settlements. They mentioned the instructions which were restricting the mine operations—above-plan coal could not be sold and it could not be purchased for a home. About Sundays devoted to extracting coal. About mines that have been deprived of independence.

A week remained prior to the strike. The threat was already rumbling in the distance, with the first peals of the thunder having been heard in the spring.

Why did they not pay attention to them at that time and why was it that neither the deputies nor Mikhail Ivanovich Shchadov mentioned a word about the strikes

in the Donets Basin, the Kuznets Basin, the Moscow area or in Vorkuta? Did they expect that it would all pass over?

"A chess player ponders his match at least several moves in advance," stated a member of the municipal committee and mine drifter at the Mine imeni Izvestiy Vladimir Babak, during a plenum of the Krasnoluchskiy Municipal Party Committee, "and yet all the time we study moves that have already been made.

The mine at which Babak works has already gone on strike a second time. At that time, in March, the shift did not go out to hoist coal. "Well, go ahead and sit for a month!" was the comment made by a visiting chief.

From a verbatim report of the 1st Session of the USSR Supreme Soviet, we quote deputy K.D. Lubchenko, assistant professor in the Legal Department of MGU [Moscow State University imeni M.V. Lomonosov]:

"At the congress we discussed the need for adopting the law governing strikes, but our homeland does not have a prophet. We waited—when they began beating us over the head, then we became concerned over the adoption of this law. Lenin (this is in the fifth edition of his works) stated that a strike is a natural means for combating bureaucratism in the Soviet State and the only form for protecting a worker, one in which he can do something and use force to have something done in his interest."

V. Kucherenko, chairman of the Planning and Budgetary-Financing Committee of the Supreme Soviet and recently chairman of the Donetsk blast Executive Committee, was in the thick of the strike for 4 days. In his opinion, the law governing a strike would save up to 80 percent of the time consumed for negotiations and generally speaking it would even prevent strikes from occurring. If you please, this is an accurate observation. At the Komsomolskaya Mine in Antratsit, the miners advanced 21 requirements, 16 of which were reviewed over a period of 40 minutes. Many of the requirements both here and in other areas never would have surfaced if the mine had possessed independence, including in the matter of labor incentives.

The Sotsialisticheskiy Donbass Mine Administration is quite properly proud of its high average wage—403 rubles, one of the highest in the association. But what about the average figure? It is higher among workers in the principal professions—mine drifters receive 556 and miners—545 rubles. The average earnings for engineering and technical workers—535 rubles.

Permit me now to cite several figures drawn from departments which have literally stunned all members of the strike committee. Yes and it must be confessed, they aroused some light-headedness among us. The wages for a director, chief engineer or chief bookkeeper of a mine administration are greater than the average by a factor of 2-3. There is a great difference between the output of a working face worker and that of a deputy director for

daily routine or the chief of the department for labor and wages. The comparison must really be made by a rate setter.

Having become acquainted with such a distribution, we requested that a grouping be prepared according to wages. Here is the result—data for June 1989.

- 17 percent of the workers receive from 300-400 rubles;
- 18 percent—from 400 to 500 rubles;
- 34 percent—from 500 to 600 rubles (consisting mainly of miners and mine drifters);
- 10 percent—from 600-700 rubles—(also mainly miners and mine drifters);
- 2 percent—from 700 to 800 rubles (in all 135 individuals, of which number 50 are workers);
- 0.4 percent—from 800 to 900 rubles (in all 28 individuals, of which 7 are workers);
- 0.3 percent—more than 900 rubles (in all 24 individuals, of which 1 is a worker).

The remaining individuals receive less than 300 rubles monthly.

These figures explain the sources of the conflict we are writing about. Stratification occurred within the worker's collective proper. And here quite often more money is obtained by those who do not work more or better.

Why is this the case?

"It is all very simple," we were informed in the Donetskugol Association; "The wages for miners are based upon a tariff rate, and that for ITR's—upon salary."

But once one becomes better acquainted with the computations, then the difficult nature of the problem becomes more apparent. It turns out that the wages are dependent not upon a ton of coal or meters of mine workings. They are determined by numerous bonuses. They were established by the well known Decree No. 1115 of 17 September 1986 and the order developed on the basis of this document. Generally speaking, this is a weighty volume containing a large number of points and computations. We examined them, together with the director for economics of the Donetskugol Association, V. Radchenko, and the chief bookkeeper, N. Zakharov. Two types of bonuses were established for the ITR's: production and special. The first is paid out for achieving the technical-economic indicators and amounts to from 20 to 100 percent of the salary. It is established and controlled by a production association.

Special bonuses are paid out for accelerating scientific-technical progress, for placing production capabilities in operation, for the production of consumer goods, for winning prize places in the republic and union socialist

competitions and many others. They are defined by an order of the minister and must not exceed 4 annual salaries.

There are no restrictions placed upon bonuses for workers. At first glance, this is good. However, only at first glance. A mine has only one wallet or purse. And when, for example, a bonus (up to 100 percent) is established for a chief technologist or for a chief of the department for labor and wages, involving a salary of 300 or 400 rubles, it will be costly even to workers in the leading professions. This is precisely why the miners are disturbed.

"We do the work in the mines," state the miners, "while they (motioning in the direction of the offices) are making off with all of the money."

It can be stated directly: we oppose wage leveling. Throughout the entire world, a high value is placed upon the work being performed by specialists and engineers. However, the proportions must be understandable and justified. Unfortunately, this cannot be said regarding the present wage system for miners, regulated as it is by bonuses. The workers are poorly oriented, insofar as the list of additional payments is concerned, and they are not aware of their rights. In accordance with the law governing a state enterprise, the payment of bonuses which would be less than the full salary could be established for some specialists. To the extent that they were earned. But many are unaware of this. And nobody appears to be in a hurry to explain it to them.

A mine is a very complicated organism. Miners who work under dangerous conditions are very sensitive to offenses and injustice. This applies particularly to evaluations of their work. Material values are also an issue here, but this is a separate subject. Many collectives are presently testing the initiative method, and new wage systems are being approved. They are based upon a ton of extracted coal and a meter of cutting.

The Partizanskaya Mine began introducing such a system into operations only last year. No strikes have occurred there.

Yes and during those days when the Donets Basin was in full operation and people were speaking out on the squares in the mining cities and settlements, it was only in Antratsit that work was interrupted for a day and then not even all work—the Partizanskaya Mine continued to operate. Had a miracle taken place there? We questioned some of the Partizanskaya miners—the mine director, Yu. Moskalenko, the secretary of the party bureau, P. Prokhorchenko, the operator of an electric locomotive and chairman of the strike committee, A. Ostapovich and an electric welder and member of the municipal party committee, A. Bikhtyarov.

In replying, they naturally mentioned what had been done at the mine earlier. Prior to the strike. Directors were selected on an alternative basis and, it bears mentioning, the first in Voroshilovgrad Oblast. During the

past training year, the "Principles of Mining Economics" were introduced into the political education system. (The completely bankrupt nature of economic training was recognized in all areas). One of the extractive sectors converted over to a contractual basis. For 3 years now, the Partizanskaya Mine has been issuing soap and towels free of charge to its miners. Miners and their families are being given trips to the Don River and Azov Sea.

We know of many mines where the achievements in the social sphere are considerably greater. The imeni Gorkiy, imeni Zasyadko and Sotsialisticheskiy Donbass. Each year the Mine imeni Zasyadko builds 130-140 apartments and there are no lines here waiting for admittance into kindergartens. It has opened its own resort hotel in Slavyanogorsk for use by all of the miners. Still another one is being completed in the Crimea. A subsidiary farm annually supplies 69 kilograms of meat, 37 liters of milk and 12 kilograms of mushrooms and vegetables per individual.

Could it be that the wages are too small? No, the average wage for the mine is 427 rubles and for miners and mine drifters—600-700, the highest in Donetsk Oblast. When the neighbors in Makeyevka recommended a minimum wage of 350 rubles per month, they simply smiled here. Mention was made of an additional payment for the nighttime and evening shifts and there was also lively talk about a payment for movement from the shaft to the working face. But if you please, not all of this was the truth.

Quite possibly, the answer was concealed in a remark which we overheard in Donetsk: "It is a bother to be dependent." For years a strong hand ruled in the mining collectives. Little by little, it was not so much conscientious discipline but rather the power of fear that prevailed. The fear of losing a bonus or the 13th wage. Meritorious service. This was painfully discussed almost in each order. In all probability, such facts also pertain to Lisichansk, Sverdlovsk and Antratsit. But the overall atmosphere is such that the collective itself repels the small owners. An interesting detail: there are more leaders in these associations than in other areas, leaders who were elected to the strike committees.

When we entered the office of the 1st secretary of the Lisichansk Municipal Party Committee, V. Lobach, he had just completed a telephone call. As always, a "direct line" was open on Monday from 9 to 11 A.M. The Lisichansk Municipal Committee maintained a lively link with the city. And the days of an open letter had not been formalized. And receiving hours were available for the personnel. All of this taken together, if you please, created an atmosphere of trust. "Our leaders have retained the trust of the workers"—such was the opinion of the chairman of the strike committee—the STK of the Lisichanskugol Association and a team leader at the Mine imeni Melnikov Vladimir Simonov.

In Lisichansk, the governmental committee did not convene: "Your people are not striking!" Lobach

insisted, "You can at least thank your personnel for their conscientiousness." In all probability, this was the only meeting on those days when it was not necessary to tear down the wall of alienation and when the guests applauded. "If we do not work, how will the country obtain the needed resources?" asked Vladimir Gennadyevich Simonov. "We have supported all of the demands of the strikers. And we ourselves assembled for the meeting—but after work."

During the first 6 months of 1989, according to official data, there were mass absences from work and this was clearly borne out by statistics. This occurred in 20 regions. The country lost roughly 200 million rubles worth of output—and this did not take into account the losses of allied workers. In July and August, the numbers increased repeatedly. There was a miner strike. Subsequently there were strikes in Estonia, Moldavia and Azerbaijan. One overheard statements to the effect that the strikes were neither socialist nor capitalist in nature. Within the striking associations there were entire brigades and sectors which wished to continue to work, but because of threats and psychological pressure they were nonetheless forced to join in the strike. It is believed that the law governing a strike must protect such people and their right to work. They must be shielded against accusations of strike breaking. The time is at hand to cease being slaves of extortion. How can there be strike-breakers in a working country? Many mining collectives, after declaring their support for the strikers, nevertheless continue to work.

In Lisichansk, the cradle of the Donets Basin, a mine which had borne the title Chernomorkoy for many years was rechristened and given the name 60th Anniversary of the Soviet Ukraine in honor of its jubilee 10 years ago. Certainly, the miners did not ask any questions, although many of them in the settlement were familiar with the history of the mine: it was built for the purpose of supplying coal for the Black Sea Fleet and during the years devoted to restoration the Black Sea sailors furnished assistance in raising the mine from the ruins. The miners are requesting that the old name be returned and they are not being suspected of a lack of love for their native republic. It is best for new names to be given to the new plants and mines.

Behind an old waste heap that has become overgrown with grass lies a cozy and picturesque settlement. Engineering networks and lines of communication were installed by the mine. The miners took out loans and built good and spacious homes. Here they are their own bosses—who is there to strike against?

More and more frequently, prolonged disputes are being replaced by healthy dialogues. But it is difficult to make contact when for a month or two there is no information on how a joint protocol is being carried out—only recently the miners achieved it. In such a situation, appeals for a strike emanate from first one then another mine and a readiness to strike is declared. Last Saturday, following prolonged and heated discussions, the regional

council of strike committees for the Donets Basin, having taken into account the existing circumstances and the futility of a strike, called upon the strike committees and the miners to concentrate their efforts on production, on strengthening labor discipline and on "satisfying the country's coal requirements." The miners are demanding regular information, at least once every 15 days, on the manner in which the protocols are being carried out from the USSR Council of Ministers, the Ministry of the Coal Industry, the AUCCTU and from the Central Committee of their own trade union.

We will finish these comments regarding today's Donets Basin with the words uttered during the Plenum of the Krasnoluchskiy Municipal Party Committee. Here is how the situation is evaluated by a drift miner at the Mine imeni 60th Anniversary of the October Revolution V. Onofriychuk, a party member and veteran:

It pleases me to learn that people are waking up and devoting thought to the matter. Whether you wish it to be so or not, history will not follow the same path it has in the past. The people themselves will operate the steering wheel of perestroika.

#### **Unemployed Youth Add to 'Army' of Vagrants**

18001582 Moscow ARGUMENTY I FAKTY in Russian No 35, 2-8 Sep 89 pp 6-7

[Report by V. Tyurin, senior inspector of the USSR MVD GUOOP, V. Fokin, senior scientific worker of the USSR MVD VNII: "Not a Crime, But a Misfortune"]

[Text] Last year 110,528 people were detained for vagrancy.

We will begin with the statistics. From 1984 to 1988, the number of those detained for vagrancy in the country decreased by more than one third (from 172,709 to 110,582). But the problem of the homeless [bomzhii], naturally, will remain and it needs an out of the ordinary overall solution.

In the meantime, the homeless are taken up by the workers of the internal affairs organs, i.e., the departments whose main work is ending administrative wrongdoing and criminal offenses, and not the social protection of vagrants. Also, recently, a preventive service was created in the internal affairs organs, which will include studying ways to prevent vagrancy.

On the average from the number of those detained for vagrancy in the country, two thirds are sent to be placed in a job, up to two percent to boarding houses for the aged and invalids, six to seven percent are accommodated in medical dispensaries, five percent in medical institutions (such as tuberculosis, skin and venereal diseases and others).

A large number of the vagrants annually are established to be wanted persons, including criminal recidivists. Of the number of those accommodated in the reception-distribution centers in 1987, 63.7 percent had previous

convictions, and in 1988 - 66.3 percent. Approximately every fifth "client" of the reception-distribution centers has been freed in the course of a year from a correctional-labor institution. This one more "reserve" from which the ranks of the homeless are replenished.

In itself, this phenomenon, of course, has been brought about socially.

Often the phenomenon of vagrancy is connected with the consequences of migration, especially seasonal migration. By way of organized recruiting in the regions of Siberia, the Far East, and the Far North, thousands of citizens are moved every year, and it often happens that they have earned big money and quickly squander it in restaurants and bars - remember the hero of Vysotskiy's song about the river Bach. At first they stay "to hibernate," but gradually they degenerate.

In our view, the movement for more humane legislation promoted to some degree the spreading of vagrancy. Thus, in December 1984, the RSFSR Supreme Soviet Presidium issued the decree "On the Procedure for Implementing Article 209 of the RSFSR Criminal Code." Analogous decrees were issued by the Supreme Soviets of other union republics. In them it was explained that a vagrant may live without providing any benefit to society, provided that his means of livelihood are not obtained by illegal means. We think such an approach to the problem of vagrancy must be changed, since it results in impunity.

At one time, restrictions on compulsory registration after a previous conviction were introduced in the large cities, in the first instance, in Moscow and Leningrad. As a result of this, thousands of people found themselves social outcasts, without a home, family, or work, after coming out of imprisonment.

Among the vagrants there has also been a significant increase in the number of people deprived of parental rights, especially young women. In the first instance, this is connected with the growth of women's alcoholism. The extreme measure of depriving drunks of parental rights, is accompanied by their eviction from their living space. Thus, it turns out that the spreading of vagrancy is connected in many respects with the imperfection of our legislation.

With the conversion of enterprises and organizations to full cost-accounting, the questions of job placement become more significantly acute, and the army of the homeless began to be augmented by unemployed youth. Thus, every sixth teenager who committed a crime in 1989 neither studied, nor worked.

There remains open the question of what can and should be done today in order to correct the situation? We think that before everything else, it is necessary to develop a system of hotel-type homes for the temporary residence of citizens who for various reasons find themselves

without the means for existence, lodging, or a residence permit. Thus, it is proposed to open doss houses in Leningrad and Yaroslavl.

Until the problem of residence permits and job placement is solved, the majority of clients of the doss houses could carry out work within their power. For example, in 1988, the work of the homeless kept in the reception-distribution centers brought in more than 1.5 million rubles. Moreover, they worked voluntarily, although on low-paying but easy work - they wrapped packages, put packaging together, etc. Unfortunately, the USSR Ministry of Finance regarded the idea of stimulating the homeless financially with disapproval. Meanwhile, the effectiveness of the work would be higher if each received on release a fixed allotment of earned credits. They would either be transferred in the sort of fixed percentage to the payments account of the hotel-type

home in which the released person was to live until resolution of the problems of residence permit, job placement, etc.

Apparently there is an intent to expand the system of boarding houses for the aged and invalids who served criminal punishment or who have been released from reception-distribution centers. The work experience of such home in Zhitomir oblast in the Ukraine and Novosibirsk oblast in the RSFSR showed that joint housing of former homeless is entirely possible. In any case, this is better than lodging them by the aged in ordinary boarding houses.

Apparently, it is also necessary to narrow the legal authority of the organs of internal affairs in the struggle with vagrancy. They must only expose and intersect the vagrants' violations of the law. The remaining questions evidently should be transferred to the organs of public health and social protection.

## MOTOR VEHICLES, HIGHWAYS

### Kremenchug Auto Works Described

904H0030A Alma-Ata AVTOTRANSPORT  
KAZAKHSTANA in Russian No 9, Sep 89 pp 1-4

[Article by V. Mikhaylov: "Trucks From the Banks of the Dnepr"]

[Text] On a huge map of the world which adorns one of the alleys on the premises of the Kremenchug Order of Lenin Automotive Plant imeni 50th Anniversary of Soviet Ukraine we can trace the path of powerful vehicles to 50 foreign countries. The products of the lead enterprise in the "AvtoKrAZ" Production Association have proved themselves in the countries of the socialist community and the states of Asia, Africa and Latin America.

"The vehicles from your plant have been operated here since 1964," said the letter from workers at the Hungarian "Boksi" enterprise. "The drivers and mechanics mention their high operating qualities, simplicity of construction, maintenance convenience, and economy."

The plant workers received a red banner from the DPRK with the words embroidered in silk: "Long live the close and inviolable friendship between the Soviet and Korean peoples!" Thanks to help from the Ukrainian machine builders, the spare parts plant in Tokchon has begun turning out motor vehicles of the same class as the Kremenchug plant.

Eight enterprises are operating within the association today in seven oblasts in the Ukraine. Their output occupies a prominent place in deliveries under the cooperative system within the sector as well. Thus the wheel plant, situated near the head plant, is supplying Minsk, Kutaisi, Zaporozhye, Lvov, and Likino motor vehicles; Kharkov, Lipetsk and Leningrad tractors; and combines from Rostov, Taganrog, Kherson and Krasnoyarsk with its output and is turning out spare parts for the "Volga" and "Moskvich" vehicles. The plants producing dies for vehicle bodies in Tokmak, cardan shafts in Kherson, steering wheels in Simferopol, vehicle assemblies in Kamenets-Podolskiy, radiators in Melitopol, and springs in Sinelnikovo are no less well-known in our country.

The history of the present Kremenchug plant began a month before the [World War II] victory, when a brigade of the Glavmostostroy [Bridgebuilding Main Administration] came to Kremenchug to look for a place to erect a plant to turn out bridge structures. In 1948 the first span was hauled away for a crossing over the Klyazma River. Altogether, 600 bridges totaling 27 kilometers in length have linked the banks of the Volga, the Moscow River, the Dnepr, the Dnestr, the Zapadnaya Dvina...

Later on, in 1956, corn combines were made here. But in 1958 it was decided to begin production of heavy-duty trucks based on the YaAZ-200. The first two KrAZ-222

"Dnepr" 10-ton dump trucks made their appearance in the May Day parade a year later.

My familiarization with the plant began with the shops where they are now manufacturing vehicles in 12 models and versions. There are truck tractors, trucks that carry trailers [bortovyye], dump trucks, lumber trucks, and different types of chassis for crane trucks and cement trucks... About 200 occupations have been "adopted" by the Kremenchug plant.

Frankly, the production buildings are unlikely to surprise anyone: they have barely enough modern equipment, without which it is hard to march in step with scientific and technical progress today. Renovation of the enterprise has been badly delayed. Insufficient capital investments, a shortage of physical resources, and lack of coordination with construction organizations have had an effect.

Accelerating renovation and technical reequipment is the goal of the comprehensive "Intensification-90" program, designed for the 12th Five-Year Plan. It is planned to make a complete transition to the production of new vehicles next year. Highly productive robots have made their appearance in the sections for welding cabs. There have been changes in quality in the painting sections as well.

"However, on the whole we are praying more for the old equipment, as they say," V. Kashchenko, deputy chief of the association's Scientific and Technical Information Department, emphasized. "One-fourth of the equipment is 35 years old. And development of new output is continuously being disrupted, inasmuch as series vehicles are being turned out on the same assembly lines."

In the parking area near the experimental shop I saw KrAZ trucks with trailers at the freight platform. They are being used in tests of new models, when their qualities and the reliability of structures and assemblies are evaluated under different climate and road conditions.

As an example, one of the vehicles made a run over the route Kremenchug-Moscow-Leningrad-Tallinn-Riga-Kaliningrad-Minsk-Kremenchug. Then it traveled another 5,000 kilometers over a 100-kilometer section of rough roads with deep ruts. Immediately afterward, "mountain conditions": climbs and descents with curves and inclines. Only after important tests such as these do the Kremenchug plant's trucks get a start in life.

The builders' care for their creation does not end with this, by the way. The Kremenchug workers are vitally interested in accurate information from local areas on the quality of parts, assemblies and systems, and the nature of failures and malfunctions. "AvtoKrAZ" supplies 10 support points and over 30 different operating organizations and motor pools with this information. After all, the trump cards of these powerful vehicles are

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their endurance and simplicity of maintenance. To lose them means to hurt the brand's reputation and to lose the foreign market.

"Does the plant make use of modern stationary methods of checking the vehicles for efficiency and reliability, as this is now done at the ZIL [Likhachev Automotive Plant] general-purpose complex?" I asked V. Redchits, the association's deputy chief designer.

"Indeed, comprehensive stationary tests make it possible to save considerable time in developing and testing new equipment and to save fuel and funds, which is especially important under the conditions of full cost accounting," he said. "However, we cannot avail ourselves of ZIL's services. Our vehicles cannot fit within the complex in a number of dimensions. And such work is clearly more than we can afford. We basically have to work in the old way. But we are planning to build our own small proving ground in the future. Of course, we would like to have, as an example, a test stand like the West German ('Schenk'), which models everything necessary for testing road conditions, and it is not necessary to drive the vehicles over courses. The time to finish development of assemblies can be reduced to roughly one-third as much this way."

[Mikhaylov] What is impeding the enterprise's intensive modernization? After all, in spite of the stable demand for your output, it lags behind the level reached by ("Magirus"), (MAN), and Volvo.

"We are conducting testing of the service life of foreign equipment at the same time. Often the prospectus data are contradictory and do not correspond to reality in a number of respects," Valentin Vladimirovich noted. "As an example, the weight of an equipped vehicle is given without the necessary additional equipment, which adds up to roughly 700 to 750 kilograms. Fuel consumption is usually given for ideal road conditions. There was a time when the KrAZ vehicles operated successfully in Scotland, and they purchased them there because their high economy. But later on foreign competitors gained the upper hand and increased the service life of their vehicles. In order to stand up to the best firms in earnest, we need considerable capital investment, approximately 200 to 250 million rubles. We do not have them; it is impossible to persuade all the authorities that this will pay for itself completely. An example from Ford's activity. The corporation spent about 3 billion dollars to develop one two-seat automobile."

[Mikhaylov] And where is your lag leading?

[Redchits] Obviously, a complete change on the production lines of automotive plants should take place roughly once in 8 to 12 years. With us, it is being delayed up to 20-25 years. Here is one of the examples. The KrAZ-6505 16-ton dump truck is our next prospective model. With practically the same equipped mass as the KrAZ-6510, which is now being readied for production, the dump truck is capable of carrying 2.5 tons more. It is 10

kilometers faster, and fuel consumption per 100 kilometers is 1 liter less. According to initial estimates, the vehicles should have come out in 1987. But a building to make hydraulic equipment was not built, and we had to rework outdated documentation twice in the process of preparation.

It turns out like chess: a loss of pace leads to a loss in quality. And when the 6505 is turned out in series in 1993, this KrAZ will correspond in its technical and economic parameters to the current Volvo and ("Shteyrs"), but these firms are not standing still, naturally. Returning to the subject of why our vehicles are not in the lead, I will mention first of all that foreign firms have a completely different approach to their business. What is the northern version of our KrAZ? Simply a modification of the series vehicle with a number of changes in its components. But the (MAN), in its "Yermak" model built for operations in the Far North, used special steels, aircraft electrical equipment, and industrial rubber items. I am not even mentioning the engines. Hence there are substantial advantages in comparing the mass of the equipped vehicle and its load, as well as in the ergonomic conditions for the driver in the cab and much more.

Of course, it hurts to see for oneself once more that the leaders of the sector, as before, are living today without aiming at the future. They say that any product will be absorbed by the vast Soviet market. Yes, the KrAZ is retaining its export positions at present in the regions of the world that are traditional for it. Owing to the fact that the KrAZ vehicles lend themselves easily to even major repair without complicated firm service. But will these pluses be enough for a long time if designers are forced to continuously struggle just to catch up with the train of scientific and technical progress that is leaving?

Very little information is coming to the association on advanced trends in developing truck production. Who can you compare yourself with if you don't have a clear idea of what your competitors are doing?

There are few at the plant now who recall exactly how they tried to install an experimental model of an air conditioner in one of the KrAZ vehicles 12 years ago. A microclimate in the cab—the dream of every driver! But no one in the country is studying these problems especially. We do not have suitable compressors. The advanced conception hangs in mid-air. And this happens more often than not, as if nothing changes in our world. The Zaporozhye "Kommunar" got ready to deal with this, but the control linkage for the unit did not work.

Such malfunctions have an unhealthy effect on the collective's creative activity. However, hopeful results have been achieved under these conditions as well. The service life of series vehicles has been increased. In 1985 it was 210,000 kilometers of running time before the first major repair of the KrAZ-257B1 and 165,000 kilometers for the 256B1 dump truck. Workers in Kazakhstan are very familiar with these vehicles. The KrAZ-250 and 260

truck models are distinguished from their predecessors by better design solutions. The former's service life was brought up to 220,000 kilometers, and the latter is guaranteed for 225,000. All-metal cabs with a reliable heating system have been installed, there are three drive axles, and the engines' power has been increased. For the first time in domestic practice, a dump truck has a front drive axle, which is of no small importance in the regions of Siberia and the Far North. The ground clearance has been increased, and substantial changes have been made in the clutch and brake system.

A truck and trailer carry 20 tons, and a truck tractor carries 30 tons—twice as much as previous versions. At the same time, the amount of metal used in them has been significantly reduced. By the way, the prospective 6505 dump truck which was mentioned is 15 percent lighter than its predecessor and its productivity is three times higher.

According to forecasts, the new family of KrAZ vehicles will save the country's national economy no less than 127 million rubles. In addition, with an equal volume of freight transported, about 7,000 drivers will be released and more than 200,000 tons of fuel will be saved.

Five KrAZ-250's with installations mounted on them for repairing and completing oil wells are operating in the "Yuganskneftegaz" Association. The temperatures range from plus 30 to minus 50 degrees there. But the equipment does not let them down. The drivers particularly like the cab: roomy, with comfortably seating, and good visibility ahead and behind.

The combination of instruments and light indicators is excellent. The instrument panel is illuminated by a soft green light at night. Engine maintenance has been made easier by good access to the components.

"In its technical and economic indicators and level of reliability, the vehicle deserves the highest evaluation," Siberian workers stated in their letter.

Last year the KrAZ-6437 tractor-trailer lumber carrier attracted specialists' attention at the "Spetsavtotsport-88" exhibition in Moscow. It is designed to carry trimmed logs and tree trunks 18 to 24 meters long. There are two heaters in the cab which operate off the engine cooling system. It has an electrically heated windshield, and the side and rear windows are dual-glazed. It has a new transmission with an intermediate drive axle and reinforced lumber-carrying equipment has been installed. According to the evaluation of a working group of the USSR Council of Ministers, the vehicle conforms to the world level.

In 1991 the 6510 dump truck will take its place on the main production line, so become familiar with it. It has a six-by-four wheel arrangement and carries a load of 13.5 tons; the equipped vehicle weighs 11.3 tons. It consumes 33 liters of fuel per 100 kilometers, and its speed is 80 kilometers per hour. The YaMZ-238 M2 engine generates as much as 240 horsepower and has a

service life of 200,000 kilometers. Its ground clearance has been increased to 300 millimeters, and the wheel track of the front and rear wheels is 2,030 and 1,825 millimeters.

The association is planning development of 15-ton dump trucks and truck tractors for 25-ton semitrailers with high cross-country capability. A truck tractor for use with semitrailers with an overall mass of 48 tons is also being developed. All the vehicles have a six-by-six wheel arrangement. According to calculations, their productivity is 20 to 25 percent higher than existing equipment of similar type, the service life is 1.5 to 2 times longer, and the fuel consumption is 15 to 20 percent less.

The shortage of consumer goods continues to be a vulnerable aspect of our existence. A reasonable question: what can the Kremenchug workers offer the army of motor vehicle enthusiasts? A trailer for "light cars" [legkovushki] is being put into production. It is planned to manufacture the first 200 units by the end of this year.

They have named the innovation "Kremin." The exterior resembles a Minsk "Zubrenok," but there are advantageous differences, too. Inasmuch as the wheels are mounted outside the bed, its surface is flat. This makes it possible to conveniently arrange six multiple-unit beehives, as an example. A tarpaulin safely covers items weighing up to 150 kilograms. In the future, after delayed-action brakes are installed, it will be able to carry up to 350 kilograms. This will substantially extend the scope of its use. Let us hope that comfortable "motor homes" for tourists will make their appearance; there is a tremendous demand for them.

I will mention in passing one more innovation which also was developed in the Ukraine, at the Odessa Motor Vehicle Assembly Plant. The trailer for the "Odiseya," like the "Kremin," will be produced in series next year. It is able to "take on board" up to 420 kilograms, which summer residents who have a "Moskvich" or "Zhiguli" should like.

The regular exchange of the results of experimental design work with the "BelavtoMAZ" Association has been a great help to the Kremenchug workers. This reduces expenses, provides for standardization of many assemblies between the plants, and as a result makes it possible to reduce the cost of the vehicles' maintenance and repair.

On the threshold of the 21st century, the machine builders are being oriented toward the development of reliable and powerful trucks which meet all the current requirements of the scientific and technical revolution in design and ergonomics. However, innovation needs continuing active support. It is possible only when there is strategic thinking by the sector's management, not tactical thinking as there is today. Otherwise, obstruction of progress is guaranteed, as it has been more than once with the Kremenchug models.

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As the legend goes, the granite blocks which are still pushing out of the smooth surface of the Dnepr's artificial seas are cossacks that have been turned into stone. Thus the river interceded for the warriors who bled to death in an unequal battle. We automatically thought about the "AvtoKrAZ": who would have given it steadfastness and strength for it to be able to prove what it is capable of?

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### Highway Accident Statistics Reviewed

*904H0013A Moscow EKONOMICHESKAYA GAZETA*  
in Russian No 40, Oct 89 p 24

[Article by S. Yablochkin, an official in the USSR Ministry of Internal Affairs Main State Motor Vehicle Inspectorate Administration: "Behind the Wheel... in the Autumn"]

[Text] "At the 744-kilometer marker on the Khabarovsk-Vladivostok road, P. A. Katolin, the 46-year-old driver of a LAZ-695 bus with the license plate 17-70 PKM, which was carrying 35 passengers, was not able to control the bus on the wet road and ran into a light support. The bus overturned because of the collision and then caught fire. As a result, the driver and four women from among the passengers died. A total of 27 individuals were treated at the city hospital for injuries of varying severity and for burns; 19 of them were hospitalized, including three children."

No matter how regrettable this is, experience shows that such reports will arrive by teletype in the control room of the USSR Ministry of Internal Affairs Main State Motor Vehicle Inspectorate Administration much more frequently during the autumn than during the summer. They say that the autumn weather is guilty.... Actually, dense morning fogs, which form unexpectedly—heaven knows from where—are no rarity now. Frost and the first ice on the asphalt will come on the southwest. In a word, a difficult road condition—bad enough as it is—becomes even more complicated on the highways.

That is why all of these weather conditions, which aggravate the work of drivers, compel all road traffic participants to be as self-disciplined and considerate toward each other as possible. True, not only "rules of a good tone" but also certain practical skills and knowledge guarantee road safety during the autumn. Let us try to determine together the main postulates.

A driver must simply know that the densest fog is formed in low places where visibility can equal practically zero. Even fog lights are sometimes ineffective here. That is why if a dense milky-grey shroud approaches in the front, you enter the fog at the slowest possible speed, keep close to the side of the road and remain prepared to stop at any second. It is better to lose several minutes than to get involved in an accident.

When the leaves are falling, drivers should remember that leaves under a vehicle's wheels act as a distinctive type of slipping bearing, reducing the engagement factor with the roadbed. That is why when there are many fallen leaves on a highway, one should not make sharp moves: braking takes a little longer than on clear asphalt.

A wet road is especially dangerous in places where country roads join the highway. As a rule, they are dirty with soil carried by the wheels of machinery, tractors and other agricultural equipment. There are similar sections in a city also—close to construction projects: For some reason, we have still not begun to wash dirt from the wheels of machines exiting a construction area....

Finally, there is the most insidious enemy of the automobile—ice-covered roads. During the autumn, it forms on bridges, underpasses and overpasses. Even with a very insignificant amount of freezing weather (during the autumn, there are frequently night frosts on the ground), the wind and moisture form a thin crust of ice on the asphalt.

A heavy rain and wide puddles on the roadbed are dangerous because of aquaplaning, which is very familiar to experienced drivers and during which a vehicle sometimes stops paying attention to the steering wheel. Even a pedestrian may not see an approaching automobile in a timely fashion because of an umbrella or turned-up collar.

When passing oncoming vehicles on wet and not very clean roads, an experienced driver turns on his windshield wipers in advance—and even the windshield washer at times. He knows that the windshield will be spattered with dirt during the passing of the vehicles and that visibility will be practically reduced to zero. It is also not a bad idea to reduce speed smoothly during this time.

There is probably much more to say that would be useful to drivers when traveling on autumn roads; however, I especially want to dwell on the following element of surprise—children. The readers have probably turned their attention to the fact that oblast, city and rayon subdivisions of the State Motor Vehicle Inspectorate have declared "Attention-Children!" 10-day periods and months at the end of August and during September. Of course, one must constantly struggle against road transport injuries (DTT) involving children. However, after long summer vacations, children unfortunately do not soon recall the rules for behaving safely on the street and the DTT danger increases.

Experienced drivers are always on guard and ready to act quickly as soon as they see a child, regardless of whether he is walking with an adult or playing nearby with friends of the same age. Frequently, children's behavior is simply unpredictable. One of my acquaintances, an experienced and disciplined driver, was involved in a road transport incident near the Sokolnicheskoye branch of Moscow's State Motor Vehicle Inspectorate. An 11-year-old youth abruptly pulled his hand from his mother's hand and ran directly under the wheels of a

Zhiguli traveling through an intersection on a green light at a speed of 20 kilometers an hour. As a result, the child received a very severe brain concussion that will evidently cause the ill-starred pedestrian pain even after his convalescence.

Everyone, of course, remembers the outstanding film, "The Rumyantsev Affair," in which the main hero—played by A. Batalov—runs off the road to avoid hitting a child with his "five-tonner," preferring to crash into the barrier. Praise to Rumyantsev in the film! I asked Moscow Oblast's State Motor Vehicle Inspectorate to find me a similar example from the recent past.... Alas, nothing came of this. I do not think that we do not have noble drivers who would put themselves at risk for the sake of saving a child's life. I am confident that such drivers will be found—it is simply that vehicles are now different, faster and more powerful and it is not always possible now to prevent an accident.

In conclusion, a driver's professionalism and experience are something that will come with time. If someone is not sure that he can manage the enormous force under the hood and the firm manifestations of mechanical laws under difficult road conditions, it would be better for such a driver to spare himself and his vehicle, putting his car into a garage during the autumn and winter. You see, it is even more difficult to drive during the winter.

#### **Motor Vehicle Figures and Facts: Data On Accidents During the First Eight Months of 1989**

	All Cases	Percent of Increase From the Corresponding Period of Last Year
Road Transport Injuries	198184	16.0
Killed	34764	23.3
Injured	217494	15.9
Through the Drivers Fault:		
Road Transport Injuries	158138	16.6
Killed	29636	25.1
Injured	181039	16.5
Road Transport Injuries Involving Children (up to 16 years old):		
Killed	3819	11.3
Injured	32622	17.0

## **MARITIME AND RIVER FLEETS**

### **River Fleet Performance Analyzed**

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[Meeting of the 'VT' Delovoy Klub [VODNYY TRANSPORT Business Club] of water transport specialists: V. Poluektov, tester of the first Raketa's and Meteor's; Lenin Prize Winner, A. Borisov, chief of the Division of High-Speed Passenger Transport for VORP [Volga United River Shipping Company]; N. Minyakin, deputy

director of the Krasnoyarsk REB [repair-operations base]; G. Fetisov, captain of the Meteor-20 Motorship of the Amur River Shipping Company; B. Khivrin, chief of the Passenger Rayon Administration of the Port of Astrakhan; Yu. Berezin, deputy chief of the Ship Facilities Service of VORP; I. Korovin, chief engineer of the Main Fleet Administration of the RSFSR Ministry of the River Fleet; and V. Markov, chief engineer of the TsKB [Central Design Bureau] for Hydrofoils; club materials prepared by Yu. Larin, V. Lyubimov and V. Chinguzov, special correspondents for VODNYY TRANSPORT: "The High-Speed Fleet: Problems and Perspectives"; date and place not given]

[Text] From the very first day that it appeared on the rivers, the high-speed passenger fleet has captured people's hearts. That was 30 years ago. The new hydrofoil and surface-effect ships stood for everything: speed, convenience, reliability. They have rapidly become popular on the rivers and the seas.

Five or ten years have passed, however, and the new fleet has serious problems. It has reached the point where the "winged" fleet, which just yesterday was the unique visiting card of the renewed water routes, has begun to lose face.

What can be done so that the high-speed ships can find their former glory? What assistance does the fleet need to become even more improved and attractive?

These questions are being discussed today at the regular meeting of the 'VT' Delovoy Klub by specialists of the country's water transport: V. Poluektov, tester of the first Raketa's and Meteor's; Lenin Prize Winner, A. Borisov, chief of the High-Speed Passenger Transport Division of the VORP [Volga United River Shipping Company]; N. Minyakin, deputy director of the Krasnoyarsk Repair-Operations Base; G. Fetisov, captain of the Meteor-20 motorship of the Amur River Shipping Company; B. Khivrin, chief of the Passenger Rayon Administration of the Port of Astrakhan; Yu. Berezin, deputy chief of Service for Ship Facilities of VORP; I. Korovin, chief engineer of the Main Fleet Administration of the RSFSR Ministry of the River Fleet; and V. Markov, chief engineer of the TsKB [Central Design Bureau] for Hydrofoils.

### **Food for Thought**

Our country has now built hundreds of high-speed ships—Raketa's, Meteor's, Kometa's, Voskhod's. Dozens of domestic hydrofoils are operating in Italy, Japan, the United States, the FRG—in a total of 20 countries.

High-speed ships transport about 26 million passengers every year along the river routes of the RSFSR Ministry of the River Fleet.

### **Where Difficulties Arise**

[V. Poluektov] It all began with the first Raketa. It was the lifelong dream of Rostislav Yevgenyevich Alekseyev

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to create a ship that would rush along the water on wings. Along with his other associates, I had the luck to work side by side with the head designer, a truly talented man.

The ship did not have an easy birth, there was suffering. The Sormov designers spent more than one sleepless night before the Raketa rose on its wing. Finally a ship appeared, new in principle, with a speed unusual for rivers, and laws of operation different from others. No matter what you say, the river workers created a small miracle. The motorship reached a speed of 60 kilometers an hour! That really meant something. I will say one thing: with the appearance of the first Raketa and its "sister-ships" after it, the Volga has become a high-speed river.

How we rejoiced! No one thought at that time that the high-speed fleet would very quickly fall upon hard times. The difficulties did not drop down from the skies, they came gradually, they accumulated. Things have already come to the point at which about 30 percent of the present consist of the high-speed fleet of the RSFSR Ministry of the River Fleet is operating on the boundary of the normative periods. The hydrofoil fleet so far has virtually no high-quality repair base. The high-speed ships are suffering from an acute shortage of supplies of motors, ZIP [spare parts, instruments, fittings] and other equipment. The personnel situation has grown complicated.

Believe me, this is a painful sight for the people who were there when the new fleet came into being.

[A. Borisov] Yes, a good many problems have accumulated for the SPK [hydrofoils]. They are slowing down the development of this type of transport, reducing transport efficiency and hindering its work. I am particularly worried by the poor technical reliability of the high-speed ships, in particular, the frequent failures of the main engines and the short delivery, according to the norms, of main engines and spares. Because of this, we on the Volga are forced to hold a large amount of the fleet in reserve: 20 out of 185 ships. This costs too dearly today. Judge for yourselves; laying ships up in reserve leads to a 1.5 million ruble increase in expenditures. Still, about two percent of the runs (and hundreds of these pile up) must be postponed for technical reasons. The troubles are particularly great at the height of the season.

[I. Korovin] Hundreds—this is for the shipping company, but take the data for the ministry, they are depressing. For example, because of the poor technical condition of the diesels in the 1987 navigation period, over 2000 SPK runs were disrupted for the Ministry of the River Fleet, and in the 1988 navigation period—about 3000 runs!

This is a real paradox. The main danger from considerably reducing the number of SPK in the next few years lies not in the fact that the ships will be written off because of wear on the hull and using up their service

period. The danger lies in something else—the high-speed ships may be placed in winter lay-up because of a lack of engines.

At present the fleet of M400 and M401A diesels of the RSFSR Ministry of the River Fleet consists of 1400 units. In fact, about 400 units from the total number of diesels have fully worked out their engine life and are in operation only because of numerous maintenance repairs. The shortage of M400 and M401A diesels in the technical reserve consists of 700 units with relatively efficient norms. It was planned that the production association producing these engines present the RSFSR Ministry of the River Fleet, in 1987 and 1988, with 262 units each year. In 1987, however, the river workers were undersupplied 143, and in 1988—42 engines.

As a result, their fleet will be renewed after 10,500 hours of operation. Compare: the designated service life before write-off for M400 and M400M diesels was 6000 hours, and for M401A diesels—9000. It turns out that the ministry needs to obtain at least 350 pieces of M400 and M401A yearly for timely replacement of the depleted resources.

It should be noted that the M400 diesels that appeared in the fleet in the 1960's are obsolete and need to be completely replaced. By an order of the Soyuzdizelmash All-Union Production Association of the USSR Ministry of Heavy, Power and Transport Machine Building on 17 June 1981, as No. 48, at the head plant of the production association, the M416 diesel was presented for production. It was designed precisely to replace the obsolete M400 on the ships. The new engine successfully passed the interdepartmental and operations tests in the USSR Ministry of the Shipbuilding Industry and RSFSR Ministry of the River Fleet, and in 1982 was certified for the Seal of Quality. So far, however, it has not arrived at the river fleet.

[A. Borisov] It is a gloomy picture. Perhaps, our ministry is not proving to be persistent enough in this problem? I know that we have appealed to Gosplan and other departments with a request to cut the tangled knot, but the matter does not get off the ground. I propose that the Ministry of the River Fleet, on behalf of all the river workers, take this to the Chairman of the USSR Council of Ministers. The engine situation for the high-speed fleet is critical. Emergency measures must be taken immediately.

#### Seeking New Paths

[N. Minyakin] I have been connected with the high-speed fleet for 16 years. For a long time I worked on the Meteor-133 motorship, under the command of the famous innovator A. Arapov, and after that I was captain of this ship. I mean, that is, that I know the anguish of the hydrofoil fleet not just from hearsay.

We, the Yenisey citizens, support the proposal of the Volga people, that the government must be informed as quickly as possible of the woes of the country's high-speed fleet.

Until the hearing, we, the local operators, must disentangle all the malfunctions of the fleet and answer for the disruptions in the runs. You will agree, however, the captain will not lay out a game of patience for each passenger and explain why the runs are so often disrupted, as did Comrade Korovin, chief engineer of the Main Fleet Administration of the RSFSR Ministry of the River Fleet.

We are trying to do what depends on us. I remember that on my motorship innovations were introduced to increase the operating potentials of the motorship. It might have been bold to put some of them in new series ships, but our improvements in TsKB and the building plant were received somewhat coldly. The ships had to be improved. I spoke with the captains more than once about this. Most of them complained, for example, that the radio-technical devices had to be installed independently. This is incorrect. The installation of radio-technical navigation devices such as radar, a semi-gyrocompass (aircraft model) and a ship-tipping indicator on a hydrofoil must be specified for the designers. Spare parts have become a standing joke. The DAU [automated remote control] often goes out of operation because of the poor-quality hydraulic cylinders. We need sealing rings, and there are none of them in the ZIP. Here we are, starting to search for the most basic spare parts.

[G. Fetisov] I agree with Nikolay Nikitovich. We wear our nerves to a frazzle to get hold of a certain specific part. A trifle, but you cannot leave on a run without it. Here on the Amur we have very complex hydrometeorological navigation conditions, and that is why high-speed ships are extremely in need of modern radio-technical navigation devices.

There is one more problem that must be mentioned. Under the conditions of cost accounting, the shipping company must, as they say, count every kopeck, but because of poorly-thought-out actions it must sometimes spend thousands of extra rubles.

Here is an example. Ferrying ships to our distant kray costs a great deal today. Let us say, we recently obtained the Meteor-199 motorship. Its balance cost was 1,045,000 rubles! After all, it cost only 460,000 rubles to build the ship. I compare these figures and cannot help but ask the question: can it not be arranged so that high-speed ships for the Amur are built or assembled at yards in our region? Is it justified? Fully. It would be more efficient for both the shipping company and for our industry, under the conditions of cost accounting.

#### Why Are the Captains Leaving

The high-speed fleet constitutes 45 percent of the total balance of passenger ships in the system of the RSFSR Ministry of the River Fleet.

The revenues from transport on high-speed ships constitutes 60 million rubles yearly, and the pure profit—3 million rubles.

[V. Khivrin] We at the lower reaches of the Volga have problems repairing and maintaining ships, even though they are in a worn-out state—a crucial problem.

The measures adopted by the RSFSR Ministry of the Maritime Fleet to organize major repair and recondition diesels and prolong their engine life are inadequate. The specialized shop created at the Tolyatti yard for these purposes is not in a position to cover the fleet's ever-increasing demand for engines.

[Yu. Berezin] The logic of our conversation requires something else. We must be extremely attentive when inspecting the service life of high-speed ships from the purely engineering and economic standpoint. At first glance, it is advantageous to increase their service periods, since in this way the yearly depreciation deductions will be reduced proportionately. These deductions at VORP, in the overall operating expenditures, constitute: for the motorship Meteor—50 percent, Raketa—30 percent and Voskhod—50 percent. When designating the service life of high-speed ships, we must take into consideration the reduction in their profitability as the service life is used up, because of the increased expenditures for repair.

It must also be borne in mind that, when increasing the service life of ships, the shipping company loses flexibility in forming its fleet balance with respect to time. The market of today's operation activity will be formed so that a motorship acquired today may in 10-15 years become a burden to a shipping company, being hopelessly obsolete. It will be impossible to operate it, and the depreciation deductions will go on for many years until the motorship is written off.

In a word, scientifically based criteria must be worked out to determine the technical condition of high-speed ships with respect to all elements. Then it will be possible for us to prolong the service periods of high-speed motorships at our own discretion, conforming to the requirements of time.

[V. Poluektov] The fleet is becoming dilapidated, and the problem is increasing. All this hits hard at the interests of the high-speed fleet, and has a painful effect on personnel policy. When was it seen that the Raketa's and Meteor's did not have enough commanders, engineers, operators and seamen? Now this is quite often a phenomenon at passenger ports and administrations.

Indeed, accidents in the hydrofoil fleet are somewhat more frequent. As a captain-mentor, I have many times

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had to investigate the consequences and causes of transport accidents. What did I see? In almost every accident, traces of fatigue and overstress in the navigators. At night they are busy, they patch the worn-out engine as best they can, and in the daytime they go out on a run without having had a good night's sleep. It is clear that it is not far from here to misfortune.

As for high-quality renewal of the high-speed fleet, in my opinion, it was long ago time for this.

#### Near and Far Goals

The first Raketa had a long life. In not quite thirty years of operation, it coiled up such a ribbon of kilometers that it could have completely circled the globe 35 times. The ship transported just a little under 2.5 million passengers.

The Raketa, Meteor, Chayka, Burevestnik, and Komet—a these and other widely known hydrofoils were designed by the collective of the Central Design Bureau for Hydrofoils, which for many years was headed by the eminent designer R. Ye. Alekseyev, doctor of Technical Sciences, and winner of the Lenin and State prizes.

At present, every fifth passenger on the Volga is transported on the high-speed fleet.

[V. Markov] We, the designers, understand the anxiety of the river workers and all those connected with the hydrofoil fleet. It would appear that the TsKB for SPK has done quite good work. The main result of the work of the creative group of the Bureau in the 30 years is the country's broadly developed system of high-speed passenger transport. We note that the motorships Raketa, Meteor, Voskhod and Polesye, included in the high-speed fleet, are series-built ships. They all have an operating speed of 60-65 kilometers an hour, created on the basis of 100 hp diesel power, and are a modification of one basic engine. It is also important that hydrofoils are basically profitable, and bring in profit.

The perestroyka taking place in all spheres of activity has brought forth new tasks for all the enterprises and organizations engaged in the transport system. For us as well, it would appear. This is fully true of the problems of planning and building the high-speed fleet.

We are distinctly aware that, with the transition of enterprises to work under the conditions of full cost accounting and self-financing, economic indicators advance to the foreground. For the designer, this poses a number of problems: he must design ships with higher technical characteristics (speed, passenger capacity, distance, seaworthiness), increase their comfort for passengers and crew and increase their reliability. In addition, he must strive to make them cheaper, despite an increase in prices for materials and completing equipment and the increased cost of labor. None of this is at all simple. It has become extremely complicated to create and introduce new ships.

[A. Borisov] You are completely right, under the new conditions of economic activity, the problem of introducing innovations has been extremely exacerbated. Why, does it seem? The river workers are interested in new equipment, and willingly take up its introduction. Indeed, the economy, if you approach it correctly, offers no interference. Then just what is it?

What about the fact that the prototype ships received are often far from perfection and do not bear out the operating characteristics incorporated in the plan. Indeed, they cost 2-2.5-fold more than series ships. If these expensive, but imperfect ships are accepted on the balance sheet of the shipping company, which has shown the initiative to introduce new equipment, depreciation deductions must be paid during the entire period of operation of the new ship. This is not right. I am convinced that the shipping company must be compensated for expenditures to operate the prototype ship. Moreover, if, after experimental operation it does not meet the requirements imposed, the expenditures to create it should be borne by the designers and the building yard, and only partially, according to a special agreement—by the buyer. This is more just, and indeed the responsibility of the partners would undoubtedly be increased.

Take the construction cost for the ships. In the last few years it has risen considerably. This is in many ways becoming a serious hindrance to renewing the passenger fleet. I will give just one example. In 1982, the shipping company acquired the Voskhod-33 motorship, at a cost of 335,000 rubles, and in 1988—the Voskhod-61, now for 429,800 rubles. The depreciation deductions immediately increased by over 28 percent! This situation has also formed with the Meteor motorships, the cost of which rose from 290,000 rubles to 460,000 during the building period.

Pay attention: the price of these two types of ships has become almost identical, and the productivity of the Meteor motorship is almost double that of the Voskhod. With an identical operating speed, the passenger capacity in one is 120 people, and in the other—71. Here, river worker, rack your brains as to how to compensate for the increase in depreciation expenditures.

[G. Fetisov] Problems like this are worrying not only the Volga citizens but also those who sail on the Yenisey, Amur, Lena and other rivers. In addition to everything else, the designers must make a more careful study of the special features of the regions for which the high-speed ships are being built. For us on the Amur the distance between population centers is quite long. Hence, the great extent of the lines. For example, the line from Khabarovsk to Bogorodskoye is 744 kilometers, Khabarovsk-Nikolayevsk—980, and the round trip Komsomolsk-Khabarovsk-Komsomolsk—720.

Consequently, on ships making these long-distance runs, comfort for both crew and passengers should be

increased. We think that a motorship needs cashier facilities, a cabin with two sleeping spaces and a galley stove to prepare food. Ships with speeds of 100-200 kilometers an hour are needed, to compete successfully with air transport.

[V. Khivrin] I agree that the design should be worked out in consideration of the conditions of the region in which it is specified for operation. The Amur has some special features, and we on the lower reaches of the Volga have quite different features. The river delta, as we know, has about 700 canals, many of which are shallow and tortuous. New, modern ships are needed here, with a passenger capacity of 70-80 persons and a speed of 60-70 kilometers an hour. They must also be economical. Their draft for the Volga delta should be not over a meter. Their passenger embarkation and disembarkation would have to be made on an unequipped bank.

[N. Minyakin] Siberian rivers also have their own specific nature. Here, the Meteor's sometimes have to operate at temperatures down to 15 degrees below zero. Therefore, the Siberians want the main cabin to be heated.

[Yu. Berezin] Of course, funds must be spent sensibly to introduce innovations, and the specific nature of the regions taken into consideration. It seems to me, however, much more important to determine the principal mainlines for construction of new hydrofoils.

Some designers and operators suggest taking the path of modernizing the existing high-speed fleet. For example, the Meteor is a good motorship. Let us improve the comfort on it! After all, though, under the existing conditions, this entails a sharp increase in cost. It is, as we have said here, very high today.

Therefore, I feel that we must not take the path of modernization but, after rolling up our sleeves, take on the development of a new generation of hydrofoils with speeds of over 100 kilometers an hour. Raising the speed and increasing the seaworthiness are the main directions of development. In my opinion, this is the only way to increase the throughput and profitability of the fleet.

A substantial hindrance to technical progress in river transport, as has been justifiably emphasized, is the limited range of the engines. A renewed hydrofoil fleet is unthinkable without new modifications of the reliable and well perfected ship diesels.

There should also be a return to the experiment of operating gas-turbine engines on the Burevestnik hydrofoils, and it should be thoroughly studied and utilized in practical work. High-speed ships are essentially airplanes. That is why aviation equipment using gas-turbine engines should be more boldly introduced.

[V. Markov] Some of the desires and advice expressed by the comrades and the collective of the hydrofoil TsKB have already been taken into consideration. High-speed ships are now being developed for the future in three

directions—these are hydrofoils (SPK) and ships with a so-called air pocket (SDVP).

They are designed with increased passenger capacity and speeds of up to 90-100 kilometers an hour, using diesels and gas-turbines as the main engine. The motorship Lastochka and gas-turbine ship Tsiklon are in test operation.

Another promising new direction consists of ships with an air pocket on the bottom. The basic technical designs, based on the development of the SVK, have been checked using self-powered models. The results of the work confirm the high efficiency of SVK, along with their structural simplicity.

Ships with a dynamic air cushion are our perspective in the 13th Five-Year Plan and the following years. Their speed is 120-150 kilometers an hour. They are distinguished by high productivity and meet the requirements of the operators for these indicators. The specific nature of the SDVP lies in the fact that they move completely detached from the water. Our next task is to create an experimental ship of the Raketa-2 type. All the requirements of the river workers for organizing the operation of this motorship will be taken into consideration.

[V. Poluektov] It is good to hear that the collective of Gorkiy designers is continuing to take steps along the path of renewing the high-speed fleet. The impression is created that, with respect to the hydrodynamics and structure of the ships of the TsKB there is solid work in progress. Does all this mean, however, that the designers have no serious problems?

[V. Markov] There are many difficulties. The basic problems that the designers must solve in developing the new SPK are the short supply in the selection of completing equipment, particularly the main engines and navigation devices. Our prospects in carrying out the program of designing new high-speed ships are related to finalizing and outfitting series output of M421 and M1400 diesels with 1350 and 2200 horse power, and also with the use of gas-turbines, including aviation.

With all the complexities, I still have faith in the good future of our fleet, so loved by the passengers.

**From the Editors.** From what the specialists have said, it is clear: everyone or almost everyone is aware of the difficulties, or the crises that the country's high-speed fleet is undergoing. Among the most painful problems, perhaps the most acute is the lack of supplies of reliable, modern diesels for our river fleet. There are great complexities in designing and introducing new equipment and operating it on the rivers.

The interested departments have more than enough evaluations and critical opinions on the situation that has formed, but to all appearances, there is not a single purposeful and long-term program for the future development of the high-speed fleet under the new conditions of

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economic activity, or for elimination of the chronic diseases and blunders in operations, which are reducing the prestige of the work of the hydrofoils.

That is why I should like to continue the talk on what the high-speed fleet will be like in the near future, and the principles on which the policy of the planners, designers,

builders and the operating activity of the high-speed transport should be constructed. How can we get out of this difficult situation with dignity? It is obvious that the actual attitude toward the high-speed fleet, as something secondary, a transport extreme, must be changed.

We await your letters and opinions.

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